CENTRAL CAROLINA TECHNICAL COLLEGE
MAIN CAMPUS – HVAC UPDATES/REPLACEMENTS

CONSTRUCTION DOCUMENTS

AUGUST 9, 2022

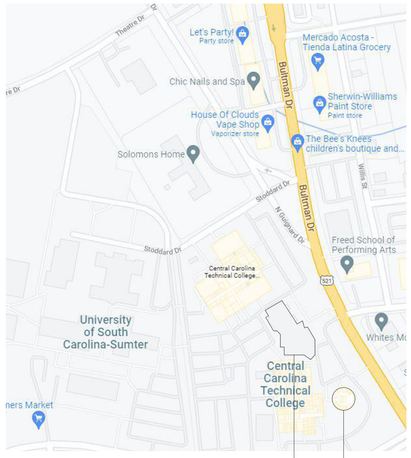
STATE PROJECT NUMBER: H59-6178-FW

RMF PROJECT NUMBER: 03210470.A0

DESIGN TEAM

RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
SUITE G
CHARLESTON, SC 29492
P: 843-971-9639 F: 843-971-9641

SITE MAP



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CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC.
CHARLESTON, SC
C-00831
REGISTERED ENGINEERS

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 24044
CRAIG R. BUCK

DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	NONE
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
TITLE SHEET

DRAWING NUMBER :
T-001

MECHANICAL DEMOLITION NOTES

1 NOTIFY THE OWNER, IN WRITING, AT LEAST TEN (10) DAYS IN ADVANCE OF ALL REQUIRED UTILITY OR SYSTEM SHUTDOWNS. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWN SHALL BE PERFORMED BETWEEN THE HOURS OF SIX (6) P.M. AND SIX (6) A.M. OR AS DIRECTED OTHERWISE BY THE OWNER AND SHALL BE ACCOMPLISHED AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH SHUTDOWN ALL SERVICES SHALL BE RESTORED SO THAT NORMAL USE OF THE UTILITIES AND SYSTEMS CAN CONTINUE.

2 ALL WORK SHALL BE PERFORMED IN A SEQUENCE AND DURING HOURS TO MINIMIZE DISRUPTION TO THE BUILDING WHICH WILL REMAIN OCCUPIED DURING CONSTRUCTION.

3 ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE JURISDICTION'S APPLICABLE CODES AND THE LOCAL FIRE MARSHALL'S REQUIREMENTS.

4 WHEN WORKING IN AND AROUND THE EXISTING BUILDING, EXTREME CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF THE EXISTING STRUCTURE AND SERVICES WHICH WILL REMAIN. REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE ENGINEER ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW WORK.

5 ALL EXISTING PIPING, EQUIPMENT, DUCTWORK AND MATERIALS NOT REQUIRED FOR RE-USE OR RE-INSTALLATION (SHOWN OR OTHERWISE) SHALL BE REMOVED. ALL EXISTING MATERIALS AND EQUIPMENT WHICH ARE REMOVED AND ARE DESIRED BY THE OWNER OR ARE INDICATED TO REMAIN THE PROPERTY OF THE OWNER, SHALL BE DELIVERED TO THE OWNER ON THE PREMISES BY THE CONTRACTOR. ALL OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR FROM THE PREMISES.

6 EXISTING CONDITIONS, I.E., PRESENCE AND LOCATION OF DUCTWORK, PIPING, EQUIPMENT AND MATERIALS, INDICATED ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF ALL DUCTWORK, PIPING, EQUIPMENT AND MATERIALS IN THE FIELD PRIOR TO STARTING ALL WORK.

7 PATCH ALL DISTURBED SURFACES, INCLUDING WALLS, CEILINGS, ROOF, FIREPROOFIING, AND FLOOR. PATCHING SHALL MATCH EXISTING ADJACENT SURFACES AS TO THICKNESS, TEXTURE, MATERIALS AND COLOR. ALL PATCHING SHALL BE PERFORMED TO THE SATISFACTION OF THE OWNER/ENGINEER AND AT NO ADDITIONAL CONTRACT COST.

8 IN GENERAL, ALL PIPING, EQUIPMENT, DUCTWORK AND MATERIALS SHOWN "LIGHT" IS EXISTING TO REMAIN. ALL PIPING, CONDUITS, EQUIPMENT, DUCTWORK AND MATERIALS SHOWN "HEAVY AND DASHED" IS EXISTING AND SHALL BE DEMOLISHED.

9 PROTECT ALL EXISTING LIFE SAFETY SYSTEMS, FIRE ALARM AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ENGINEER IN WRITING WHEN SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.

10 EXISTING EQUIPMENT WHERE INDICATED TO BE REMOVED SHALL BE UNFASTENED AT THE SUPPORTS OR ATTACHMENTS AND THEN THE SUPPORTS OR ATTACHMENTS SHALL BE REMOVED FROM THE BUILDING.

12 DO NOT USE CUTTING TORCHES UNTIL THE WORK AREA IS CLEARED OF FLAMMABLE MATERIALS. AT CONCEAL SPACES, SUCH AS DUCT AND PIPE INTERIORS, VERIFY CONDITIONS AND CONTENTS OF HIDDEN SPACE BEFORE STARTING FLAME-CUTTING OPERATIONS. MAINTAIN FIRE WATCH AND PORTABLE FIRE SUPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS. MAINTAIN ADEQUATE VENTILATION WHEN USING CUTTING TORCHES.

2021 Edition

TABLE 3E CODE INFORMATION FOR ADDITIONS, ALTERATIONS, OR CHANGE OF OCCUPANCY TO AN EXISTING STRUCTURE

TYPE OF PROJECT:
☒ Alteration (IEBC Chaps. 7, 8 &9) ☐ Addition (IEBC Chap. 11) ☐ Change of Occupancy (IEBC Chap. 10)

METHOD OF COMPLIANCE:
(Check only one Option and all items that apply under that Option.)

☒ **Option 1: Prescriptive Compliance Method (IEBC Chapter 5)**

☐ **Option 2: Work Area Compliance Method (IEBC Chaps. 6-12)**
- ☒ Alteration Level 1, minor including reroofing (IEBC Chap. 7)
- ☐ Alteration Level 2, reconfigurations of space (IEBC Chap. 8)
- ☐ Alteration Level 3, work area exceeds 50% (IEBC Chap. 9)

Aggregate area of building: _____ SF
Work area: _____ SF

☐ **Option 3: Performance Compliance Method (IEBC Chap. 13)**

Original Building Code and Edition Applicable at time of Construction: _____

Existing Sprinkler System?	☒ Yes	☐ No
Existing Fire Alarm System?	☐ Manual	☒ Auto
Seismic Evaluation Required?	☐ Yes	☒ No
Major Facility Project? (See §48-52-810(10)(a))	☐ Yes	☒ No
Change of Occupancy:	☐ Yes	☒ No
Existing Occupancy Classification(s): _____		
New Occupancy Classification(s): _____		
Historic Building (IEBC Chapter 12):	☐ Yes	☒ No

☐ Preservation ☐ Rehabilitation ☐ Restoration ☐ Reconstruction

MECHANICAL GENERAL NOTES

1 PRIOR TO PREPARING THE BID, IT IS RECOMMENDED THAT THE CONTRACTOR AND SUBCONTRACTORS VISIT THE SITE TO FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS AND MAKE ALL NECESSARY INVESTIGATIONS AS TO THE LOCATIONS OF UTILITIES AND ALL OTHER MATTERS WHICH CAN AFFECT THE WORK. NO ADDITIONAL COMPENSATION WILL BE MADE TO THE CONTRACTOR AS A RESULT OF THEIR FAILURE TO FAMILIARIZE THEMSELF WITH THE EXISTING CONDITIONS UNDER WHICH THE WORK MUST BE PERFORMED.

2 THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND BUILDING DIMENSIONS PRIOR TO WORK. ANY VARIATIONS, DISCREPANCIES, OR FIELD ALTERATIONS TO THESE DESIGN DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT ATTENTION PRIOR TO WORK. IF CONTRACTOR COMMENCES WORK WITHOUT NOTIFYING ARCHITECT OF VARIATIONS, DISCREPANCIES, OR FIELD ALTERATIONS, THAT SHALL CONSTITUTE WAIVER TO ANY CLAIM BY CONTRACTOR FOR ADDITIONAL EXPENSES NECESSARY TO PERFORM WORK ASSOCIATED WITH THOSE CONDITIONS.

3 CONTRACTOR SHALL FURNISH ALL INFORMATION AND DOCUMENTATION TO SECURE ALL REQUIRED PERMITS AND SHALL COORDINATE THIS DATA WITH THE CONSTRUCTION DOCUMENTS WHERE REQUIRED.

4 WHERE MATERIALS REFERENCED ON DRAWINGS, OR NECESSARY TO COMPLETE THE WORK OF THIS CONTRACT ARE NOT SPECIFIED HEREIN, PROVIDE BEST QUALITY MATERIALS. WHERE MATERIALS ARE INTENDED TO MATCH EXISTING, PROVIDE CLOSEST POSSIBLE MATCH, SUBJECT TO OWNER'S APPROVAL. ALL ITEMS AND WORK ON DRAWINGS ARE NEW UNLESS INDICATED OTHERWISE. ALL WORK WHICH HAS BEEN DAMAGED SHALL BE REPAIRED OR REPLACED. WHERE ITEM CANNOT BE REPAIRED TO A "NEW CONDITION", OR WHERE THE STRUCTURAL INTEGRITY HAS BEEN AFFECTED, ITEM SHALL BE REPLACED.

5 DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

6 INSTALL ALL MECHANICAL EQUIPMENT SUCH THAT MANUFACTURER'S MAINTENANCE AREA IS CLEAR.

7 PROVIDE AND INSTALL ALL NECESSARY HARDWARE, BRACKETS, BRACING, ANCHORING, INSERTS, BLOCKING, FURRING OR OTHER SUPPLEMENTARY ITEMS NEEDED FOR COMPLETE INSTALLATION OF EQUIPMENT, FIXTURES AND ACCESSORIES.

8 DUCTWORK SIZES SHOWN ON PLANS ARE AIR SIDE SIZES. WHERE DUCTS ARE SHOWN AS LINED, DIMENSIONS SHALL BE INCREASED TO REFLECT THAT THICKNESS OF THE LINING.

9 RUN ALL PIPING CONCEALED ABOVE CEILING EXCEPT WHERE INDICATED.

MECHANICAL SYMBOLS

PIPING COMPONENTS AND SPECIATIES

SYMBOL	DESCRIPTION
	PIPE GUIDE
	PIPE HANGER
S	PIPE SLIDE
	PIPE ANCHOR
	FLEXIBLE PIPE
FM	FLOW METER

DUCTWORK SYMBOLS

SYMBOL	DESCRIPTION
T	THERMOSTAT
	DUCT SMOKE DETECTOR
	SMOKE DETECTOR (IONIZATION)
	AIR FLOW
100 CFM	TRANSFER AIR FLOW (CFM INDICATED)
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
FD	FIRE DAMPER
FSD	COMBINATION FIRE / SMOKE DAMPER
VD	VOLUME DAMPER
	FLEXIBLE CONNECTION
	HORIZONTAL ACCESS DOOR
	VERTICAL ACCESS DOOR
	RECTANGULAR BRANCH TAKE-OFF
	BELL MOUTH BRANCH TAKE-OFF
	ROUND BRANCH TAKE-OFF
	DUCT TRANSITION
	SQUARE TO ROUND TRANSITION
UP/DN	DUCTWORK CHANGE IN ELEVATION (UP OR DOWN)
	SUPPLY / OUTSIDE AIR DUCT RISER
	RETURN AIR DUCT RISER
	EXHAUST / RELIEF AIR DUCT RISER
X / XX — AIR DEVICE TYPE CFM	AIR DEVICE IDENTIFIER
	POINT OF CONNECTION
	POINT OF DISCONNECTION

EQUIPMENT DESIGNATIONS

SYMBOL	DESCRIPTION
AHU-X	AIR HANDLING UNIT DESIGNATION
EF-X	EXHAUST FAN DESIGNATION
F-X	FILTER DESIGNATION
RF-X	RETURN FAN DESIGNATION
RD-X	ROOF DRAIN DESIGNATION
RTU-X	ROOFTOP AIR HANDLING UNIT DESIGNATION
SF-X	SUPPLY FAN DESIGNATION

PIPING SYMBOLS

SYMBOL	DESCRIPTION
– – CHR – –	CHILLED WATER RETURN
——CHS——	CHILLED WATER SUPPLY
——CD——	CONDENSATE DRAIN
– – CWR – –	CONDENSER WATER RETURN
——CWS——	CONDENSER WATER SUPPLY
– – HR – –	HEATING WATER RETURN
——HS——	HEATING WATER SUPPLY

LINETYPE SYMBOLS

DESIGNATION	DESCRIPTION
- - - - - - - - - -	DEMOLITION WORK
- - - - - - - - - -	DEMOLITION WORK (BELOW ROOF/ASSOCIATED LEVEL)
	EXISTING WORK
	NEW WORK
	NEW WORK (BELOW ROOF/ASSOCIATED LEVEL)
—— — — ——	MATCHLINE

MECHANICAL ABBREVIATIONS

NOTE: THIS IS A STANDARD ABBREVIATION LIST. SOME ABBREVIATIONS MAY NOT APPEAR ON THE ACCOMPANYING DRAWINGS.

#	NUMBER, POUND
$	DOLLAR
%	PERCENT
&	AND
+	PLUS
-	MINUS
/	DIVIDE BY, PER
<	LESS THAN
=	EQUALS, EQUAL TO
>	GREATER THAN
x	MULTIPLY BY, BY
x"	INCHES, INCH
'	FEET, FOOT
±	PLUS OR MINUS
≤	LESS THAN OR EQUAL TO
≥	GREATER THAN OR EQUAL TO
@	AT
A	COMPRESSED AIR
AAV	AUTOMATIC AIR VENT
ACV	AUTOMATIC CONTROL VALVE
AD	ACCESS DOOR, AREA DRAIN
AF	ANTIFREEZE
AFF	ABOVE FINISHED FLOOR
AR	ARGON GAS
ATC	AUTOMATIC TEMPERATURE CONTROL
BAS	BUILDING AUTOMATION SYSTEM
BBD	BOILER BLOWDOWN
BCWR	BEARING COOLING WATER RETURN
BCWS	BEARING COOLING WATER SUPPLY
BDD	BACKDRAFT DAMPER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BMS	BUILDING MANAGEMENT SYSTEM
BO	BLOW OFF
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BV	BALANCING VALVE
CA	CONTROL AIR
CBD	CONTINUOUS BLOWDOWN
CC	CAMPUS CONDENSATE
CCMS	CENTRAL CONTROL AND MONITORING SYSTEM
CD	CONDENSATE DRAIN
CF	CHEMICAL FEED
CFM	CUBIC FEET PER MINUTE
CHEL	CHELANT
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CHX	CHILLED WATER HEAT EXCHANGER
CO	CLEANOUT
CO2	CARBON DIOXIDE
CS	CLEAN STEAM
CT	COMBUSTION TURBINE
CW	COLD WATER, DOMESTIC CITY WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
°C	DEGREE(S) CELSIUS
D	DEEP, DRAIN WATER
DB	DECIBEL, DRY BULB
DDC	DIRECT DIGITAL CONTROL
DESIG	DESIGNATION
DHR	DISTRIBUTION HEATING WATER RETURN
DHS	DISTRIBUTION HEATING WATER SUPPLY
DHWR	DOMESTIC HOT WATER RETURN
DHWS	DOMESTIC HOT WATER SUPPLY
DIA, Ø	DIAMETER
DIR	DEIONIZED WATER RETURN
DIS	DEIONIZED WATER SUPPLY
DL	DOOR LOUVER
DN	DOWN
DSP	DRY SPRINKLER PIPE
DTR	DUAL TEMPERATURE RETURN
DTS	DUAL TEMPERATURE SUPPLY
DW	DISTILLED WATER
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ED	EQUIPMENT DRAIN
EJ	EXPANSION JOINT
ELEV	ELEVATION
EMS	ENERGY MANAGEMENT SYSTEM
EQ	EQUIPMENT, EQUALIZING
ESP	EXTERNAL STATIC PRESSURE
ETC	ETCETERA
EVAC	GAS EVACUATION
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
#2FOR	NUMBER 2 FUEL OIL RETURN
#2FOS	NUMBER 2 FUEL OIL SUPPLY
#6FOR	NUMBER 6 FUEL OIL RETURN
#6FOS	NUMBER 6 FUEL OIL SUPPLY
F	FIRE LINE
F&T	FLOAT AND THERMOSTATIC TRAP
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER, FOUNDATION DRAIN
FDR	FLOOR DRAIN
FDV	FIRE DEPARTMENT VALVE
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FIN/FT	FINS PER FOOT
FIN/INCH	FINS PER INCH
FM	FLOWMETER
FMF	FLOWMETER FITTING
FO	FUEL OIL
FOF	FUEL OIL FILL
FOO	FUEL OIL OVERFLOW
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOSUCT	FUEL OIL SUCTION
FOT	FUEL OIL TRANSFER
FOTP	FUEL OIL TRANSFER PUMP
FOV	FUEL OIL VENT
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FT	FOOT, FEET
FW	FEED WATER
FWR	FEED WATER RECIRCULATION
FWS	FEED WATER SUCTION
°F	DEGREE(S) FAHRENHEIT
G	NATURAL GAS
GAL	GALLON, GALLONS
GEN	GENERATOR
GHR	GLYCOL HEATING RETURN
GHS	GLYCOL HEATING SUPPLY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	AUTOMOTIVE LUBRICATION PIPING
H	HIGH
HB	HOSE BIB
HED	HOSE END DRAIN VALVE
HP	HORSEPOWER
HPR	HIGH PRESSURE STEAM RETURN
HPS	HIGH PRESSURE STEAM SUPPLY
HR	HEATING WATER RETURN
HRR	HEAT RECOVERY RETURN
HRS	HEAT RECOVERY SUPPLY
HRSG	HEAT RECOVERY STEAM GENERATOR
HS	HEATING WATER SUPPLY
HT	HEIGHT
HTHR	HIGH TEMPERATURE HEATING WATER RETURN
HTHS	HIGH TEMPERATURE HEATING WATER SUPPLY
HW	HOT WATER
HWR	HOT WATER RECIRCULATION
HZ	HERTZ
IA	INSTRUMENT AIR
ICW	INDUSTRIAL COLD WATER
IHR	INDUSTRIAL HOT WATER RECIRCULATION
IHW	INDUSTRIAL HOT WATER
IN	INCH, INCHES
INV EL	INVERT ELEVATION
KW	KILOWATTS
L	LONG, LENGTH
LA	LABORATORY AIR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LBS/HR	POUNDS PER HOUR
LN	LIQUID NITROGEN
LP	LIQUID PROPANE
LPG	LIQUID PETROLEUM GAS
LPR	LOW PRESSURE STEAM RETURN
LPS	LOW PRESSURE STEAM SUPPLY
LV	LABORATORY VENT, LABORATORY VACUUM
LW	LABORATORY WASTE
LWT	LEAVING WATER TEMPERATURE
MA	MEDICAL AIR
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCC	MOTOR CONTROL CENTER
MEQ	MECHANICAL EQUIPMENT
MH-#	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MOTOR OIL PIPING
MOD	MOTOR OPERATED DAMPER
MPR	MEDIUM PRESSURE STEAM RETURN
MPS	MEDIUM PRESSURE STEAM SUPPLY
MV	MEDICAL VACUUM
N	NITROGEN
NA, N/A	NOT APPLICABLE
NC	NOISE CRITERIA, NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NO	NORMALLY OPEN, NITROUS OXIDE
No	NUMBER
NOM	NOMINAL
NPSH	NET POSITIVE SUCTION HEAD
NPW	NON-POTABLE WATER
O	OXYGEN
OA	OUTSIDE AIR
OD	OVERFLOW DRAIN
OED	OPEN ENDED DUCT
OF	OVERFLOW
OS&Y	OUTSIDE STEM AND YOKE
P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
PA	PLANT AIR
PC	PUMPED CONDENSATE
PCHR	PRIMARY CHILLED WATER RETURN
PCHS	PRIMARY CHILLED WATER SUPPLY
PCP	PUMP CONTROL PANEL
PCR	PUMPED CONDENSATE RECIRCULATION
PCWR	PROCESS COOLING WATER RETURN
PCWS	PROCESS COOLING WATER SUPPLY
PD	PRESSURE DROP, PUMP DISCHARGE
PG	PILOT GAS
PGR	PROCESS GLYCOL WATER RETURN
PGS	PROCESS GLYCOL WATER SUPPLY
PH	PHASE
PHR	PRIMARY HEATING RETURN
PHS	PRIMARY HEATING SUPPLY
PIV	POST INDICATING VALVE
PPH	POUNDS PER HOUR
PRV	PRESSURE REDUCING VALVE, PRESSURE REGULATING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PW	POTABLE WATER
RA	RETURN AIR, RELIEF AIR
RAF	RETURN AIR FAN
RD	REFRIGERANT DISCHARGE
RDR	ROOF DRAIN
RH	RELATIVE HUMIDITY
RHR	REHEAT WATER RETURN
RHS	REHEAT WATER SUPPLY
RI	REMOVE AND REINSTALL
RL	REFRIGERANT LIQUID
ROR	REVERSE OSMOSIS WATER RETURN
ROS	REVERSE OSMOSIS WATER SUPPLY
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RV	RELIEF VENT, REFRIGERANT VENT
RX	REMOVE EXISTING
SA	SUPPLY AIR, SHOCK ARRESTOR
SAN	SANITARY, SOIL, WASTE
SCHR	SECONDARY CHILLED WATER RETURN
SCHS	SECONDARY CHILLED WATER SUPPLY
SD	STORM DRAIN, SMOKE DETECTOR
SF	SQUARE FOOT
SHR	SECONDARY HEATING WATER RETURN
SHS	SECONDARY HEATING WATER SUPPLY
SL	SOUND LINING
SP	STATIC PRESSURE
SPR	SPRINKLER LINE
SQ FT	SQUARE FOOT
SS	STAINLESS STEEL
SSUL	SODIUM SULFITE
STDR	STORM DRAIN
SW	SOFT WATER
TS	TAMPER SWITCH
TSP	TOTAL STATIC PRESSURE
TW	TREATED WATER
TWR	TEMPERED WATER RETURN
TWS	TEMPERED WATER SUPPLY
TYP	TYPICAL
ΔT	TEMPERATURE DIFFERENCE
UCD	UNDERCUT DOOR
UL	UNDERWRITERS LABORATORIES
V	VACUUM, VOLTS
VD	VOLUME DAMPER
VENT	VENTILATION
VFD	VARIABLE FREQUENCY DRIVE
VPD	VACUUM PUMP DISCHARGE
VSD	VARIABLE SPEED DRIVE
VTR	VENT THROUGH ROOF
W	WATTS, WIDE
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WH	WALL HYDRANT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

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STATE OF SOUTH CAROLINA — RMF ENGINEERING, INC. CHARLESTON, SC C-00857 — REGISTERED ENGINEERS

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:
SOUTH CAROLINA PROFESSIONAL ENGINEER No. 24044 CRAIG R. BUCK

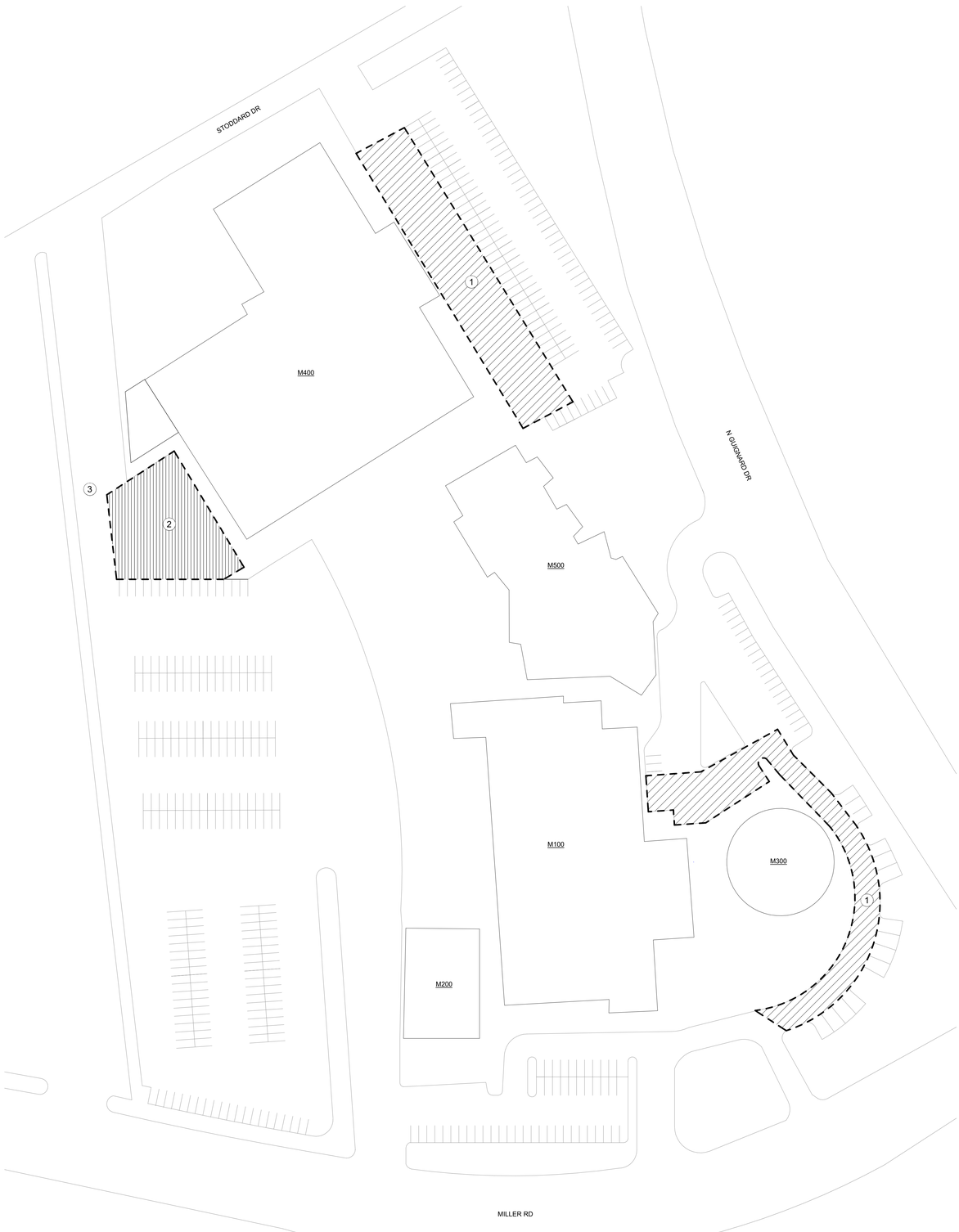
DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	NONE
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
MECHANICAL NOTES, SYMBOLS, & ABBREVIATIONS

DRAWING NUMBER :
M-001



MECHANICAL SITE PLAN - M300 M500
SCALE: 1" = 50'-0"

GENERAL NOTES

1. DRAWING IS PROVIDED FOR GENERAL CONSTRUCTION LAYDOWN AND STAGING AREA. CONTRACTOR SHALL COORDINATE CRANE LOCATION AND LIFTS AS REQUIRED.
2. CONTRACTOR SHALL SUBMIT TO THE ENGINEER AND OWNER AN APPROVED CONSTRUCTION SCHEDULE THAT INCLUDES CRANE LIFTS AND CRANE LOCATIONS.
3. THREE DAYS WILL BE ALLOCATED TO THE CONTRACTOR FOR M300 RTU REPLACEMENT. IT IS PREFERRED THAT THIS WORK IS COMPLETED OVER A LONG HOLIDAY WEEKEND.
4. M500 RTU-1 - RTU-4 DO NOT SERVE A LARGE SPACE AND CAN BE REPLACED AT ANYTIME.
5. ALL M500 ROOF WORK MUST BE COORDINATED WITH THE CONTRACTOR REPLACING THE ROOF.

(#) DRAWING NOTES

1. CRANE LOCATION FOR RTU INSTALLATION.
2. CONTRACTOR LAYDOWN AREA.
3. CONTRACTOR TO MAINTAIN SINGLE LANE VEHICLE EGRESS AT ALL TIMES.

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STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC.
CHARLESTON, SC
C-00831
REGISTERED ENGINEERS

NORTH

KEY PLAN

REV	DESCRIPTION	DATE

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SOUTH CAROLINA PROFESSIONAL ENGINEER
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DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	1" = 50'-0"
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
MECHANICAL SITE PLAN

DRAWING NUMBER :
M-002

25' 0 25' 50'
SCALE: 1" = 50'-0

GENERAL NOTES

1. REMOVE COMPLETELY THE EXISTING AIR HANDLING UNIT, CONDENSATE DRAIN PIPING, CONTROLS, ELECTRICAL, AND SUPPORTS.
2. EXISTING EQUIPMENT CURB WILL BE REUSED FOR NEW AIR HANDLING UNIT.
3. COVER ANY AND ALL OPENINGS IN EXISTING TO REMAIN DUCT OR EQUIPMENT CURBS AT THE POINT OF DISCONNECTION FOR THOSE THAT WILL REMAIN OPEN OVERNIGHT.

RD-EX
1" CD
10" H EQUIPMENT CURB
RTU-2

MATCHLINE - NO CONTINUATION

6" H EQUIPMENT CURB
RTU-1
1" CD
RD-EX

6" H EQUIPMENT CURB
RTU-3
RD-EX
1" CD

M300 ROOF - MECHANICAL - DEMOLITION
SCALE: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0

RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
SUITE G
CHARLESTON, SC 29492
P: 843-971-9639 F: 843-971-9641

CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC.
CHARLESTON, SC
C-00831
REGISTERED ENGINEERS

NORTH

KEY PLAN

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:
SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 24044
CRAIG R. BUCH

DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	1/4" = 1'-0"
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
M300 ROOF - MECHANICAL - DEMOLITION

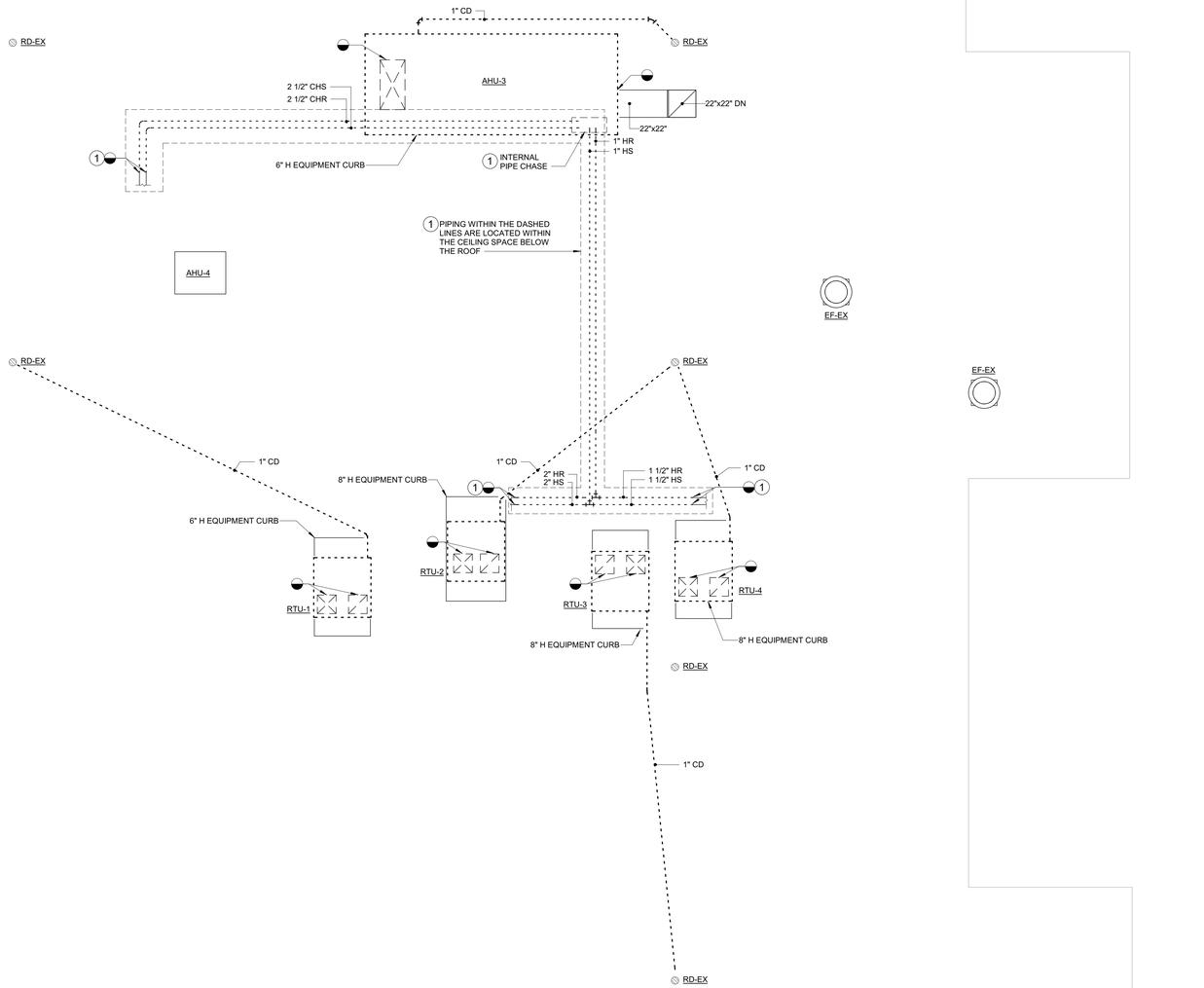
DRAWING NUMBER :
MD-101

GENERAL NOTES

1. REMOVE COMPLETELY THE EXISTING RTU, CONDENSATE DRAIN PIPING, CONTROLS, ELECTRICAL, AND SUPPORTS
2. EXISTING RTU EQUIPMENT CURB WILL BE REUSED FOR NEW AIR HANDLING UNIT.
3. COVER ANY AND ALL OPENINGS IN EXISTING TO REMAIN DUCT OR EQUIPMENT CURBS AT THE POINT OF DISCONNECTION FOR THOSE THAT WILL REMAIN OPEN OVERNIGHT.

(#) DRAWING NOTES

1. DEMOLISH 30' OF CHS/R & HS/R PIPING IN CEILING SPACE BELOW AHU-3, AS MEASURED FROM THE INTERNAL PIPE CHASE.



M500 ROOF - MECHANICAL - DEMOLITION
SCALE: 1/4" = 1'-0"

RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
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CHARLESTON, SC 29492
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CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC.
CHARLESTON, SC
C-00831
REGISTERED ENGINEERS

NORTH

KEY PLAN

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:
SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 21044
CRAIG R. BUCK

DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	1/4" = 1'-0"
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

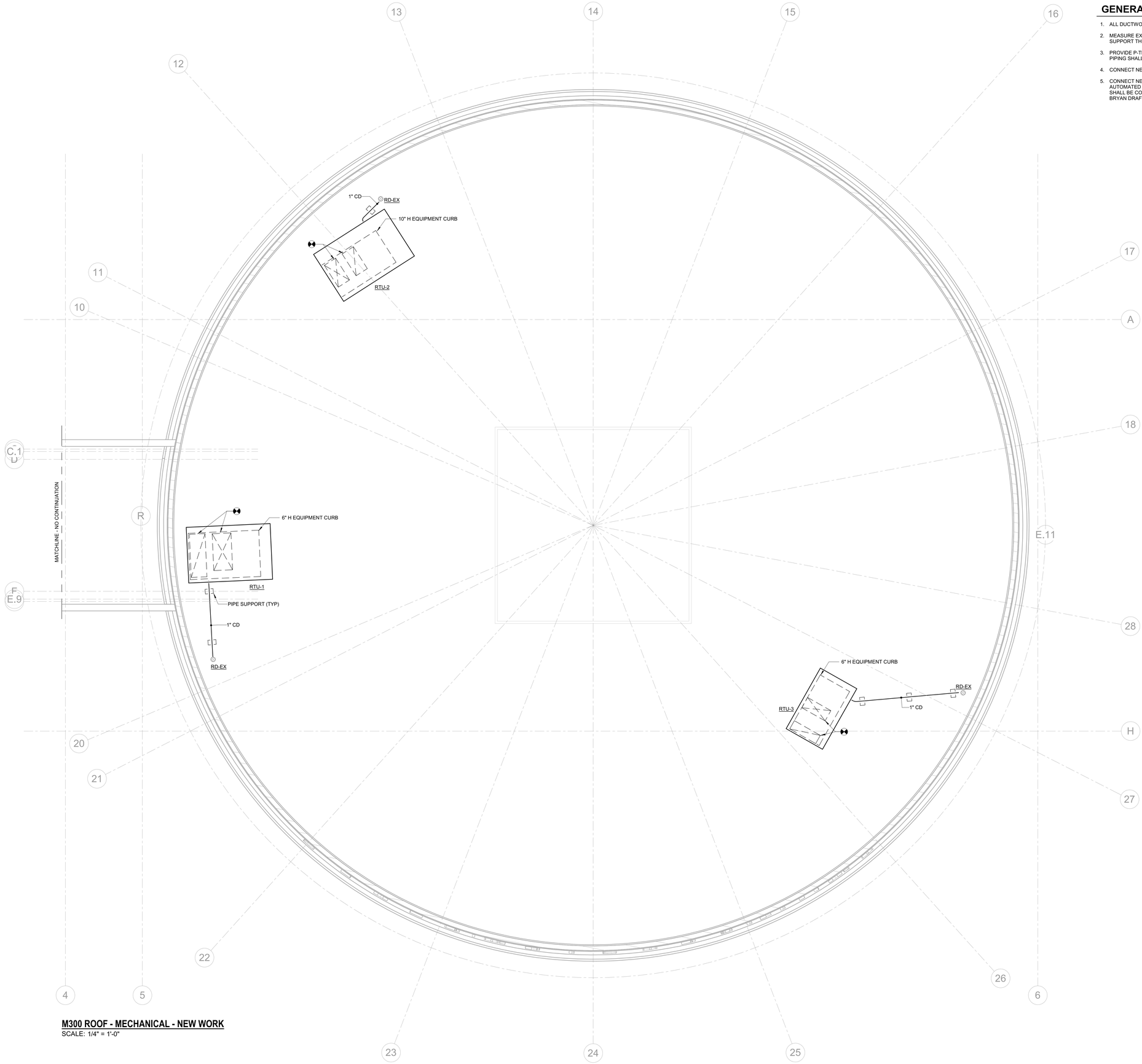
DRAWING TITLE :
M500 ROOF - MECHANICAL - DEMOLITION

DRAWING NUMBER :
MD-102

2' 0 2' 4'
SCALE: 1/4" = 1'-0

GENERAL NOTES

1. ALL DUCTWORK, PIPING, AND INSULATION MATERIALS SHALL MATCH EXISTING
2. MEASURE EXISTING ROOF CURB. COORDINATE AND PROVIDE THE CURB ADAPTER SIZE TO SUPPORT THE NEW RTU.
3. PROVIDE P-TRAP AT THE CONDENSATE DRAIN CONNECTION. HORIZONTAL CONDENSATE DRAIN PIPING SHALL BE SLOPED 1/8" PER 1 FOOT TO TERMINATION POINT.
4. CONNECT NEW SUPPLY AND RETURN DUCT CONNECTIONS WITH NEW FLEXIBLE CONNECTIONS.
5. CONNECT NEW ROOFTOP AIR HANDLING UNITS TO THE EXISTING BUILDING 300 BUILDING AUTOMATED CONTROL SYSTEM TO OPERATE AS THE EXISTING UNITS DO. ALL CONTROLS WORK SHALL BE CONNECTED TO THE EXISTING SIEMENS SOLUTION MANAGEMENT SYSTEM. CONTACT BRYAN DRAFTS AT CONTROLS MANAGEMENT INC FOR ALL CONTROLS WORK ON THIS PROJECT.



M300 ROOF - MECHANICAL - NEW WORK
SCALE: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0

RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
SUITE G
CHARLESTON, SC 29492
P: 843-971-9639 F: 843-971-9641

CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA — RMF ENGINEERING, INC. CHARLESTON, SC C-00831 — REGISTERED ENGINEERS

NORTH

KEY PLAN

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:
SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 24044 — CRAIG R. BUCH

DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	1/4" = 1'-0"
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

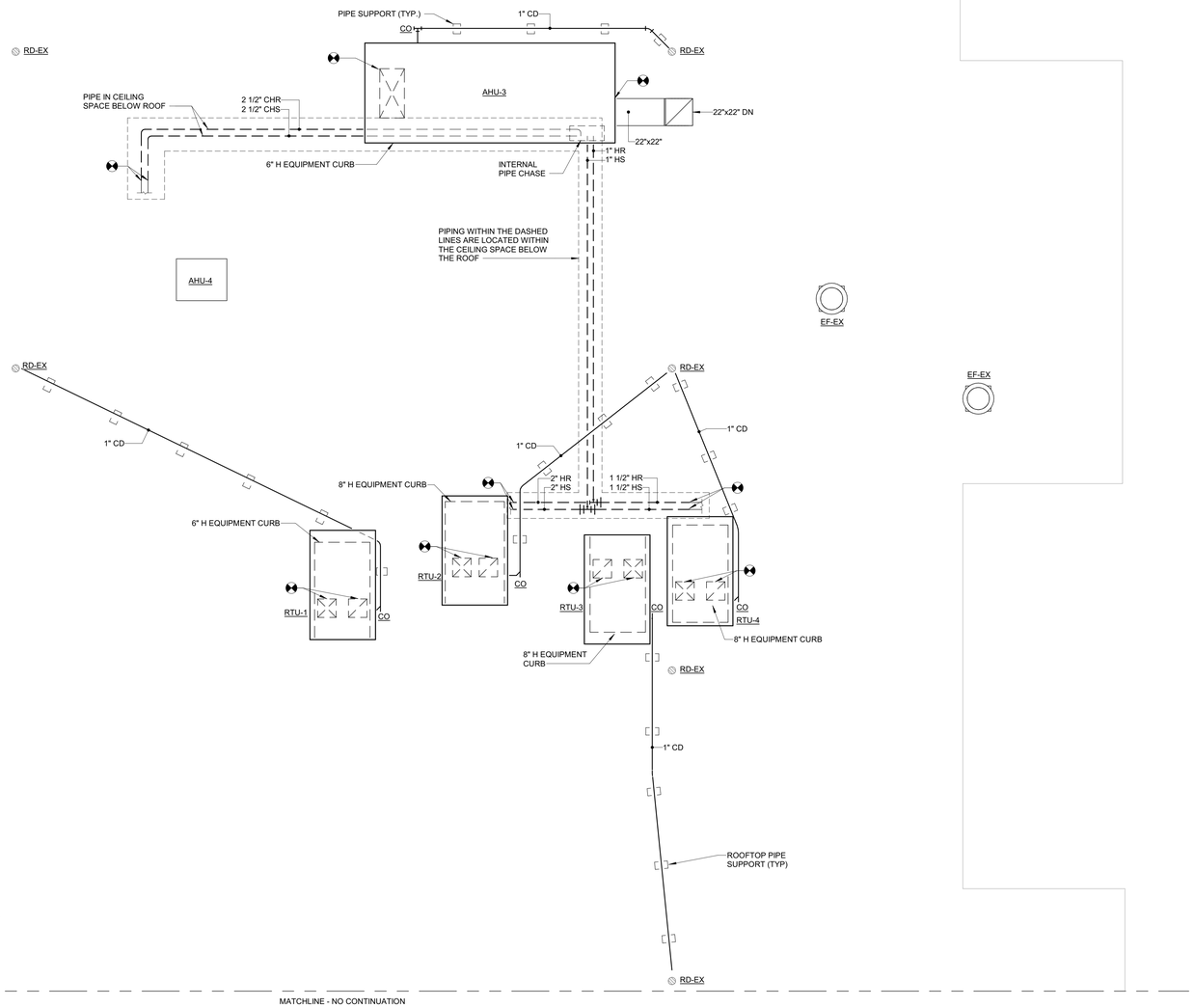
PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
M300 ROOF - MECHANICAL - NEW WORK

DRAWING NUMBER :
M-101

GENERAL NOTES

1. ALL DUCTWORK, PIPING, AND INSULATION MATERIALS SHALL MATCH EXISTING
2. MEASURE EXISTING ROOF CURB. COORDINATE AND PROVIDE THE CURB ADAPTER SIZE TO SUPPORT THE NEW RTU.
3. PROVIDE P-TRAP AT THE CONDENSATE DRAIN CONNECTION. HORIZONTAL CONDENSATE DRAIN PIPING SHALL BE SLOPED 1/8" PER 1 FOOT TO TERMINATION POINT.
4. CONNECT NEW SUPPLY AND RETURN DUCT CONNECTIONS WITH NEW FLEXIBLE CONNECTIONS.
5. CONNECT NEW ROOFTOP AIR HANDLING UNITS TO THE EXISTING BUILDING 500 BUILDING AUTOMATED CONTROL SYSTEM TO OPERATE AS THE EXISTING UNITS DO. ALL CONTROLS WORK SHALL BE CONNECTED TO THE EXISTING SIEMENS SOLUTION MANAGEMENT SYSTEM. CONTACT BRYAN DRAFTS AT CONTROLS MANAGEMENT INC FOR ALL CONTROLS WORK ON THIS PROJECT.
6. PROVIDE ROOF MOUNTED PIPE SUPPORTS EVERY 5'-0" FOR CONDENSATE DRAIN PIPING.
7. NEW CHS/R & HS/R PIPING IS LOCATED THAT IS NOT WITHIN THE INTERNAL PIPE CHASE SHALL BE INSTALLED IN THE CEILING SPACE BELOW AHU-3.



500 ROOF - MECHANICAL - NEW WORK
SCALE: 1/4" = 1'-0"

RMF ENGINEERING, INC.
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CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC.
CHARLESTON, SC
C-00831
REGISTERED ENGINEERS

NORTH

KEY PLAN

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 24044
CRAIG R. BUCK

DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	1/4" = 1'-0"
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
M500 ROOF - MECHANICAL - NEW WORK

DRAWING NUMBER :
M-102

2' 0 2' 4'
SCALE: 1/4" = 1'-0

AIR HANDLING UNIT INPUT / OUTPUT SUMMARY

IO SYSTEM	POINT NO.	IO SYSTEM TYPE	INPUTS: ANALOG: MEASURED: TEMPERATURE	VELOCITY PRESSURE	STATIC PRESSURE	DIFFERENTIAL PRESSURE	RELATIVE HUMIDITY	CARBON DIOXIDE	GPM	CALC.: BTU/HR	RUN TIME	CFM	TONS	ENTHALPY	BINARY: STATUS (DIFF. PRESS)	LOW STATIC LIMIT	SMOKE	FREEZESTAT	HIGH HUM. LIMIT	STATUS (AMPS)	END SWITCH	VFD FAULT	HIGH STATIC LIMIT	OUTPUTS: BINARY: START STOP	DAMPER POSITION	VALVE POSITION	ANALOG: DAMPER POSITION	VALVE POSITION	FAN SPEED	WHEEL SPEED	PUMP SPEED	SPECIAL FEATURES: ALARMS: LOW TEMP LIMIT	HIGH TEMP LIMIT	LOW DIFF. PRESSURE	HIGH DIFF. PRESSURE	HIGH HUM. LIMIT	HIGH CO2 LIMIT	FAULT (VFD)	PROOF	FAILURE	SMOKE ALARM	PROGRAMS: TIME SCHEDULING	ALTERNATE	TIME DELAY START	OCCUPIED/UNOCCUPIED	TEMPERATURE RESET	MORNING WARM UP	LEAD/LAG	SMOKE CONTROL	COLOR GRAPHICS
GLOBAL	1	TEMPERATURE SENSOR	X																													X	X															X
GLOBAL	2	HUMIDISTAT					X																														X													X
RTU	1	SMOKE DETECTOR															X																									X							X
RTU	2,8,15	DUCT SENSOR (HUMIDITY)					X																													X													X
RTU	3,7,9.10,11,13,14	DUCT SENSOR (TEMPERATURE)	X																													X	X															X
RTU	4	DAMPER (RELIEF)																									X																X					X
RTU	5	DAMPER (RETURN)																									X																X					X
RTU	6	DAMPER (OUTDOOR)																							X																		X					X
RTU	12	AIRFLOW MEASURING DEVICE		X								X																																					X
RTU	16	DAMPER (SMOKE)																				X						X															X					X
RTU	17	END SWITCH																								X	X																	X					X
RTU	18,19,20	VARIABLE FREQUENCY DRIVE (FANS)									X										X		X		X				X																X				X

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SUITE G
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P: 843-971-9639 F: 843-971-9641

CENTRAL CAROLINA TECHNICAL COLLEGE

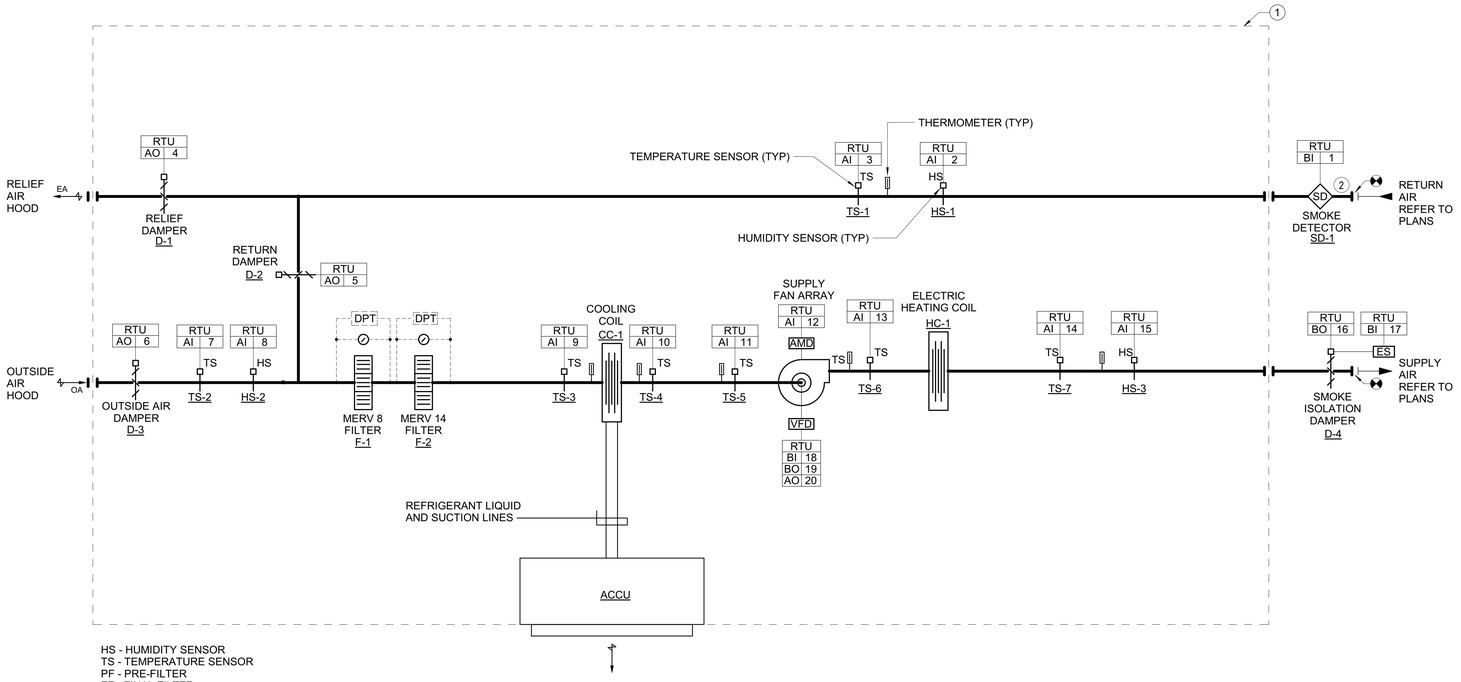
STATE OF SOUTH CAROLINA — RMF ENGINEERING, INC. CHARLESTON, SC C-00837 — REGISTERED ENGINEERS

DRAWING NOTES

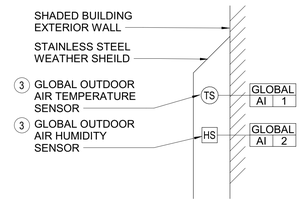
1. THIS SCHEMATIC IS TYPICAL FOR ALL RTUS.

(#) DRAWING NOTES

1. ALL ITEMS WITHIN THE DASHED LINE ARE PART OF THE AIR HANDLING UNIT.
2. SMOKE DETECTOR SHALL BE FURNISHED AND WIRED UNDER DIVISION 28 AND INSTALLED BY DIVISION 23.
3. GLOBAL OUTDOOR AIR SENSORS SHALL BE USED FOR ALL TEMPERATURE CONTROL.



HS - HUMIDITY SENSOR
TS - TEMPERATURE SENSOR
PF - PRE-FILTER
FF - FINAL FILTER
AMD - AIRFLOW MEASURING DEVICE
DPT - DIFFERENTIAL PRESSURE TRANSMITTER
VFD - VARIABLE FREQUENCY DRIVE
DT - DAMPER, TWO-POSTION
DM - DAMPER, MODULATING



REV	DESCRIPTION	DATE
	REVISIONS	

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 21044 CRAIG R. BUCH

DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

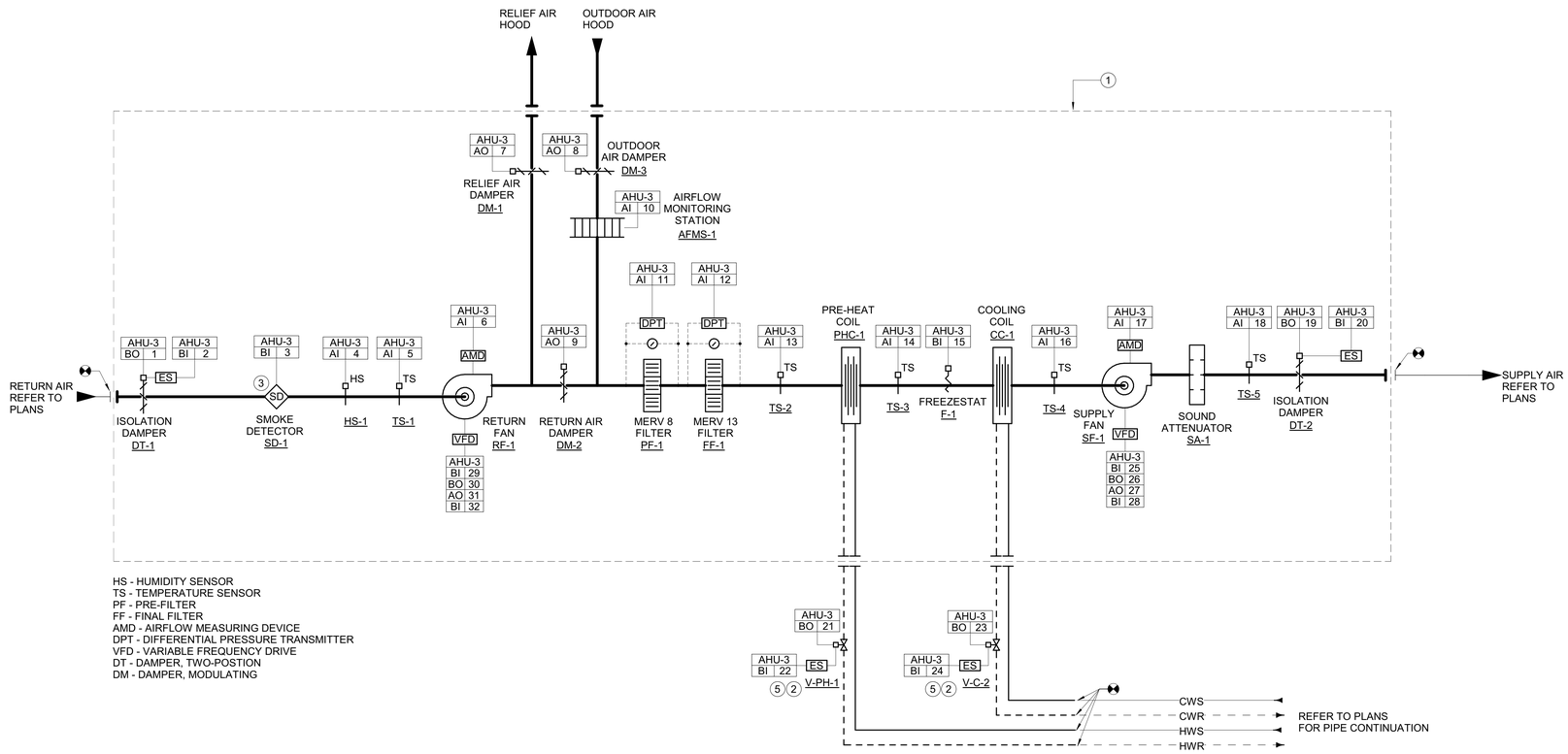
PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
ROOFTOP AIR HANDLING UNIT SCHEMATIC

DRAWING NUMBER :
M-201

AIR HANDLING UNIT INPUT / OUTPUT SUMMARY

		INPUTS																															OUTPUTS								SPECIAL FEATURES																								
		ANALOG													BINARY																				BINARY			ANALOG								ALARMS											PROGRAMS														
		MEASURED							CALC.																																																														
POINT NO.	IO SYSTEM TYPE	TEMPERATURE	VELOCITY PRESSURE	STATIC PRESSURE	DIFFERENTIAL PRESSURE	RELATIVE HUMIDITY	CARBON DIOXIDE	GPM	BTU/HR	RUN TIME	CFM	TONS	ENTHALPY	STATUS (DIFF. PRESS)	LOW STATIC LIMIT	SMOKE	FREEZESTAT	HIGH HUM. LIMIT	STATUS (AMPS)	END SWITCH	VFD FAULT	HIGH STATIC LIMIT	START STOP	DAMPER POSITION	VALVE POSITION	DAMPER POSITION	VALVE POSITION	FAN SPEED	WHEEL SPEED	PUMP SPEED	LOW TEMP LIMIT	HIGH TEMP LIMIT	LOW DIFF. PRESSURE	HIGH DIFF. PRESSURE	HIGH HUM. LIMIT	HIGH CO2 LIMIT	FAULT (VFD)	PROOF	FAILURE	SMOKE ALARM	TIME SCHEDULING	ALTERNATE	TIME DELAY START	OCCUPIED/UNOCCUPIED	TEMPERATURE RESET	MORNING WARM UP	LEAD/LAG	SMOKE CONTROL	COLOR GRAPHICS
1,19	DAMPER (ISOLATION)																							X																																				X
2,20	END SWITCH (DAMPER)																			X																			X																				X
3	SMOKE DETECTOR															X																									X																				X
4	DUCT SENSOR (HUMIDITY)					X																																																								X
5,13,14,16,18	DUCT SENSOR (TEMPERATURE)	X																														X	X																												X
6,17	AIRFLOW MEASURING DEVICE		X								X																																																				X
7	DAMPER (RELIEF)																									X																																		X
8	DAMPER (OUTDOOR)																							X																																			X
9	DAMPER (RETURN)																									X																																		X
10	AIRFLOW MONITORING STATION		X								X																																																			X
11,12	DIFFERENTIAL PRESSURE TRANSMITTER (FILTER BANK)				X																															X																								X
15	FREEZESTAT	X																														X																												X
21,23	CONTROL VALVE																								X		X																																X
22,24	END SWITCH (VALVE)																			X																			X																				X
25,26,27,28,29,30,31,32	VARIABLE FREQUENCY DRIVE (FANS)									X									X		X		X					X										X															X					X		X
1	TEMPERATURE SENSOR	X																														X	X																												X
2	HUMIDISTAT					X																														X																								X

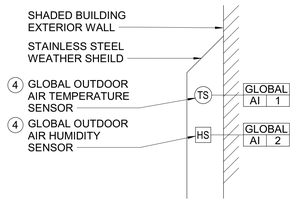


GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR FAN TYPE

(#) DRAWING NOTES

1. ALL ITEMS LOCATED WITHIN THE DASHED LINE ARE PART OF THE AIR HANDLING UNIT.
2. REFER TO COIL PIPING DETAILS FOR ADDITIONAL VALVING REQUIREMENTS.
3. SMOKE DETECTOR SHALL BE FURNISHED AND WIRED UNDER DIVISION 28 AND INSTALLED BY DIVISION 23
4. GLOBAL OUTDOOR AIR SENSORS SHALL BE USED FOR ALL TEMPERATURE CONTROL.
5. REPLACE 30' OF PIPE AND ALL ASSOCIATED COMPONENTS INCLUDED WITHIN THIS SECTION, AS MEASURED FROM THE INTERNAL PIPE CHASE.



RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
SUITE G
CHARLESTON, SC 29492
P: 843-971-9639 F: 843-971-9641

CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA — RMF ENGINEERING, INC. CHARLESTON, SC C-00837 — REGISTERED ENGINEERS

REV	DESCRIPTION	DATE
	REVISIONS	

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA — PROFESSIONAL ENGINEER — No. 24044 — CRAIG R. BUCH

DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

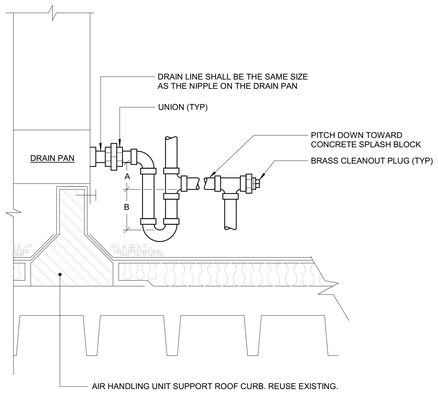
PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
AIR HANDLING UNIT SCHEMATIC - AHU-3

DRAWING NUMBER :
M-202

BIM 360://321470A0-CCTC Main Campus Multiple HVAC Replacement/321470_MEP_R21.rvt
8/9/2022
11:39:39 AM

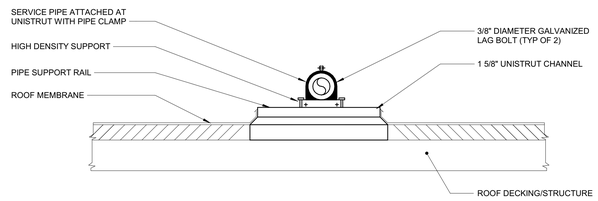


NOTE:

1. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PIPE SIZES AND TRAP CONFIGURATION.

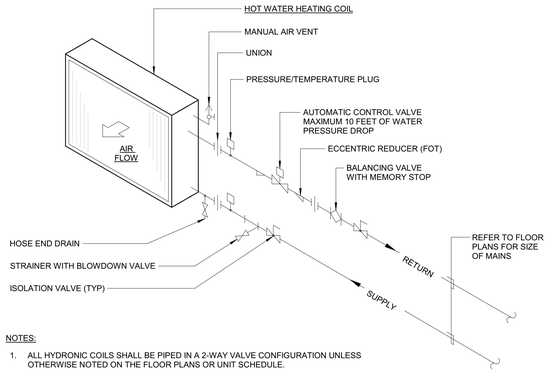
1 DETAIL - COIL CONDENSATE DEEP SEAL TRAP (ROOF)

SCALE: N.T.S.



2 DETAIL - PIPE SUPPORT

SCALE: N.T.S.



NOTES:

1. ALL HYDRONIC COILS SHALL BE PIPED IN A 2-WAY VALVE CONFIGURATION UNLESS OTHERWISE NOTED ON THE FLOOR PLANS OR UNIT SCHEDULE.
2. PIPING FOR CHILLED WATER COOLING COILS SHALL BE SIMILAR.

3 DETAIL - HYDRONIC COIL (2-WAY)

SCALE: N.T.S.

RMF ENGINEERING, INC.
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CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC
CHARLESTON, SC
C-00857
REGISTERED ENGINEERS

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 21044
CRAIG R. BUCK

DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
MECHANICAL DETAILS

DRAWING NUMBER :
M-301

ROOFTOP AIR HANDLING UNIT SCHEDULE

DESIGNATION	LOCATION	AIRFLOW		SUPPLY FAN		RETURN FAN		COOLING COIL DATA							ELECTRIC HEATING COIL DATA			EER	ECONOMIZER	ELECTRICAL					BASIS OF DESIGN	REMARKS
								EAT °F		LAT °F																
		CFM	DESIGN OA CFM	HP	RPM	HP	RPM	DB	WB	DB	WB	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	OUTDOOR AMBIENT °F DB	EAT °F	LAT °F	TOTAL CAPACITY (MBH)			VOLTS	PHASE	HERTZ	MOCP (A)	MCA (A)		
RTU-1	M300 ROOF	3500	960	3	804	1.7	804	76.6	66.7	57.2	55.7	143.4	92.5	95	56.1	84.0	105.5	11	YES	208	3	60	110	109	TRANE TSD150G3RNC	
RTU-2	M300 ROOF	3200	930	3	804	1.7	804	76.5	66.6	57.1	55.6	143.1	92.5	95	56.1	84.0	96.4	11	YES	208	3	60	110	109	TRANE TSD150G3RNC	
RTU-3	M300 ROOF	2000	540	1	796	0.5	796	76.9	67.6	57.2	55.7	92.8	55.5	95	54.6	84.0	63.5	11.2	YES	208	3	60	60	53	TRANE TSC092H3RGA	
RTU-1	M500 ROOF	1600	400	0.6	1717	0.3	1717	76.8	66.1	55.0	54.5	56.9	38.2	95	59.4	84.0	43.0	11.9	YES	460	3	60	35	33	TRANE HORIZON OAB	
RTU-2	M500 ROOF	2500	240	1.4	2336	0.8	2336	75.9	63.9	55.0	54.5	70.4	56.8	95	65.9	84.0	49.4	10.7	YES	460	3	60	45	44	TRANE HORIZON OAB	
RTU-3	M500 ROOF	1800	400	0.7	1846	0.4	1846	76.6	65.7	55.0	54.5	61.6	42.6	95	60.6	84.0	46.1	11.9	YES	460	3	60	35	33	TRANE HORIZON OAB	
RTU-4	M500 ROOF	1600	400	0.6	1717	0.4	1717	76.8	66.1	55.0	54.5	56.9	38.2	95	59.4	84.0	43.0	11.9	YES	460	3	60	35	33	TRANE HORIZON OAB	

AIR HANDLING UNIT SCHEDULE

DESIGNATION	LOCATION	AIRFLOW			FAN DATA		COOLINIG COIL DATA							PREHEATING COIL DATA				ELECTRICAL			BASIS OF DESIGN	REMARKS
							EAT °F		LAT °F													
		CFM	DESIGN OA CFM	MINIMUM OA CFM	HP	EXTERNAL STATIC PRESSURE (IN H2O)	DB	WB	DB	WB	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	GPM @ 45 °F EWT 60 °F LWT	EAT °F	LAT °F	TOTAL CAPACITY (MBH)	GPM @ 180 °F EWT 160 °F LWT	VOLTS	PHASE	HERTZ		
AHU-3	M500 ROOF	7159	2280	1400	10	2.95	77.3	67.0	52.3	50.9	346.4	195.6	46.2	42.9	60	66.5	6.7	480	3	60	TRANE PCCB	

BUILDING DESIGN COMMISSIONING DATA		
1.	OUTSIDE DESIGN CONDITIONS: SUMMER SUMMER (DEHUMIDIFICATION): WINTER:	 93.4°F DB / 75.4°F WB 82.0°F DB / 75.3°F WB 27.2 °F
2.	COMFORT HEATING: INTERIOR SPACES	 70°F ±2°F
3.	COMFORT COOLING: INTERIOR SPACES	 75°F ±2°F / 50% RH
4.	CODES: INTERNATIONAL BUIDING CODE, 2018 INTERNATIONAL MECHANICAL CODE, 2018 INTERNATIONAL PLUMBING CODE, 2018 INTERNATIONAL ENERGY CONSERVATION CODE, 2009 NATIONAL ELECTRIC CODE, 2017 NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS (LATEST EDITIONS)	

RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
SUITE G
CHARLESTON, SC 29492
P: 843-971-9639 F: 843-971-9641

CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC.
CHARLESTON, SC
C-00837
REGISTERED ENGINEERS

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 24044
CRAIG R. BUCK

DRAWN BY:	SOD	DATE:	08/09/2022
DESIGNED BY:	SOD	SCALE:	
CHECKED BY:	DWZ	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DWZ	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
MECHANICAL SCHEDULES

DRAWING NUMBER :
M-401

ELECTRICAL SYMBOLS

LIGHTING SYMBOLS

SYMBOL	DESCRIPTION	MH (UON)
$	SINGLE POLE TOGGLE SWITCH	48" TOD
$a	SWITCH: SUB-LETTER INDICATES FIXTURES CONTROLLED (a)	48" TOD
$2	DOUBLE POLE TOGGLE SWITCH	48" TOD
$3	THREE-WAY TOGGLE SWITCH (SPDT)	48" TOD
$4	FOUR-WAY TOGGLE SWITCH (DPDT)	48" TOD
$K	KEY OPERATED SWITCH	48" TOD
$3D a	THREE WAY DIMMER SWITCH: SUBLETTER INDICATES FIXTURES CONTROLLED (a)	48" TOD
$M	MANUAL STARTER W/ OVERLOADS	48" TOD
$P	SWITCH W/ PILOT LIGHT	48" TOD
$D	DIMMER SWITCH	48" TOD
$4D	4 BUTTON DIMMER SWITCH	48" TOD
$LV	LOW VOLTAGE CONTROL SWITCH	48" TOD
$T	MANUAL TIME SWITCH	48" TOD
$C	MOMENTARY CONTACT SWITCH	48" TOD
$WP	SWITCH WITH WEATHERPROOF ENCLOSURE	48" TOD
OS DS	OCCUPANCY SENSOR (CEILING & WALL MOUNTED)	
VS	VACANCY SENSOR	
T	TIME CLOCK	
R	RELAY	
L	LIGHTING CONTACTOR	
P	PHOTOCELL OR PUSHPLATE SWITCH	
UL924	EMERGENCY SHUNT RELAY, UL 924 LISTED (CEILING MOUNTED)	
	LIGHTING FIXTURE: RECESSED, SURFACE, OR PENDANT MOUNTED - TYPE AS SPECIFIED	
	LIGHTING FIXTURE: 2 BALLAST	
	LIGHTING FIXTURE: INDUSTRIAL	
	LIGHTING FIXTURE: WALL MOUNTED - TYPE AS SPECIFIED	
	LIGHTING FIXTURE: RECESSED, SURFACE, OR PENDANT MOUNTED	
	LIGHTING FIXTURE: WALL MOUNTED - TYPE AS SPECIFIED	
	WALL WASHER	
	ADJUSTABLE WALL WASHER	
	LIGHTING FIXTURE ON EMERGENCY OR NIGHT LIGHT CIRCUIT (NL)	
	EMERGENCY BATTERY PACK: W/ NUMBER OF HEADS INDICATED	
E	EMERGENCY BATTERY PACK: W/ REMOTE HEADS	
	REMOTE EMERGENCY HEAD	
	EMERGENCY BATTERY PACK: SEMI RECESSED, CEILING MOUNT	
	EXIT SIGN: CEILING OR PENDANT MOUNTED (SHADED PORTION INDICATES FACE)	
	EXIT SIGN: WALL MOUNTED - END, BACK	
	EXIT SIGN: W/ DIRECTIONAL ARROWS	
	POLE MOUNTED LIGHTING FIXTURE: SINGLE HEAD, DOUBLE HEAD	
	POLE MOUNTED LIGHTING FIXTURE: SINGLE, POLE TOP	
	LIGHTING POLE (SPORTS)	

SPECIAL SYSTEMS SYMBOLS

SYMBOL	DESCRIPTION	MH (UON)
H	FIRE ALARM HORN TYPE SPEAKER	NOTE 5
H	FIRE ALARM FLASHING STROBE LIGHT - WALL MOUNTED	NOTE 5
F	FIRE ALARM HORN	NOTE 5
F	COMBINATION FIRE ALARM HORN AND FLASHING STROBE LIGHT	NOTE 5
S F	S - CEILING SPEAKER, F - FIRE ALARM SPEAKER	
S	FIRE ALARM SPEAKER W/ STROBE	
S	HORN TYPE SPEAKER	
H	MAGNETIC DOOR HOLDER	
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER	
FAAP	FIRE ALARM ANNUNCIATOR PANEL	
FACP	FIRE ALARM CONTROL PANEL	
RAM	RESCUE ASSISTANCE MASTER CONTROL PANEL	48" TOD
RAR	RESCUE ASSISTANCE REMOTE STATION	48" TOD
TP	FIRE ALARM TRANSPONDER	
DS ES	DOOR SOLENOID, ELECTRIC STRIKE - LOCKING DEVICE CONNECTION POINT	
F	FIRE ALARM PULL STATION	48" TOD
H E	HEAT DETECTOR: E = ELEVATOR CONTROLS	
S AB P E	SMOKE DETECTOR (PHOTOELECTRIC): AB = AUDIBLE BASE, E = ELEVATOR CONTROLS	
S	SMOKE DETECTOR (IONIZATION)	
D	FIRE ALARM DUCT DETECTOR WITH RELAY	
C	CARBON MONOXIDE DETECTOR	
ARC	FIRE ALARM SYSTEM ADDRESSABLE RELAY - CONTROL	
ARM	FIRE ALARM SYSTEM ADDRESSABLE RELAY - MONITOR	
RAL	FIRE ALARM SYSTEM REMOTE ALARM LIGHT	
FS	FLOW SWITCH CONNECTION	
TS	TAMPER SWITCH CONNECTION	
TRANSMITTER LBT — LIGHT BEAM — RECEIVER LBR	FIRE ALARM LINEAR BEAM SMOKE DETECTOR: TRANSMITTER (LBT) AND RECEIVER (LBR)	
F	FIRE FIGHTER'S TELEPHONE JACK	48" TOD
M	MONITOR SYSTEM JUNCTION BOX	36" CTR
A	AMPLIFIER	
K	KEYPAD	48" TOD
CR	CARD READER	48" TOD
DA	DOOR ALARM CONTACT	
	ROUGH-IN JUNCTION BOX FOR CCTV CAMERA	
P	PUSH BUTTON PLATE	
	TELEVISION ANTENNA OUTLET	18" CTR
C	CABLE TV OUTLET	
	TELEVISION SYSTEM SPLITTER - 2 WAY, 4 WAY	
CD	A/V CREDENZA LOCATION	
IP	A/V INPUT PLATE	
R	A/V IN-WALL RACK	
MT	A/V MONITOR TV	
SC	A/V SCREEN CONTROL	
SP	A/V SCHEDULING PANEL	
ST	A/V SIGNAGE TV	
TP	A/V TOUCH PANEL	
	DATA/TELEPHONE OUTLET, CEILING MOUNTED	
	TELEPHONE OUTLET	18" CTR
	DATA OUTLET	18" CTR
W	TELEPHONE OUTLET, WALL MOUNTED	54" CTR
E	TELEPHONE OUTLET, EMERGENCY	54" TOD
	DATA/TELEPHONE OUTLET: UNSHADED AREA = DATA, SHADED AREA = VOICE NUMERALS INDICATE QUANTITY OF WIRED JACKS	18" CTR
	TELEPHONE OUTLET, FLOOR MOUNTED	
	DATA OUTLET, FLOOR MOUNTED	
	DATA/TELEPHONE OUTLET, FLOOR MOUNTED: UNSHADED AREA = DATA, SHADED AREA = VOICE NUMERALS INDICATE QUANTITY OF WIRED JACKS	
	COMBINATION POWER & TELEPHONE OUTLET, FLOOR MOUNTED	
	COMBINATION POWER & DATA OUTLET, FLOOR MOUNTED	
	COMBINATION POWER & DATA/TELEPHONE OUTLET, FLOOR MOUNTED	
WAP	WIRELESS ACCESS POINT	

POWER SYMBOLS

SYMBOL	DESCRIPTION	MH (UON)
$	COMBINATION SWITCH AND SIMPLEX RECEPTACLE	48" TOD
$	COMBINATION SWITCH AND DUPLEX RECEPTACLE	48" TOD
	SIMPLEX RECEPTACLE	18" CTR
E	DUPLEX RECEPTACLE: 'E' (IF SHOWN) INDICATES CONNECTED TO EMERGENCY CIRCUIT	18" CTR
	DUPLEX RECEPTACLE: FLOOR MOUNTED	
	DUPLEX RECEPTACLE: SPLIT WIRED, BOTTOM HALF SWITCHED	18" CTR
	DUPLEX RECEPTACLE: CEILING MOUNTED	
	DUPLEX RECEPTACLE: PEDESTAL TYPE	
	DUPLEX RECEPTACLE: MOUNTED 6" ABOVE BACKSPLASH OR COUNTER	
GFI	DUPLEX RECEPTACLE: GROUND FAULT INTERRUPTER TYPE	18" CTR
GFI	DUPLEX RECEPTACLE: GFI MOUNTED 6" ABOVE BACKSPLASH OR COUNTER	
H	DUPLEX RECEPTACLE: MOUNTED HIGH	84" CTR
IG	DUPLEX RECEPTACLE: ISOLATED GROUND	18" CTR
	DUPLEX RECEPTACLE: AT 54" A.F.F.	54" CTR
	DOUBLE DUPLEX RECEPTACLE	18" CTR
IG	DOUBLE DUPLEX RECEPTACLE ISOLATED GROUND	18" CTR
C	SIMPLEX RECEPTACLE: CART RECHARGE	36" CTR
C	DUPLEX RECEPTACLE: CART RECHARGE	36" CTR
P	DUPLEX RECEPTACLE: PAY PHONE	54" CTR
A	SPECIAL RECEPTACLE: NEMA 6-20R (20A, 2P, 3W, 208V)	18" CTR
B	SPECIAL RECEPTACLE: NEMA 6-30R (30A, 2P, 3W, 208V)	18" CTR
C	SPECIAL RECEPTACLE: NEMA 14-20R (20A, 3P, 4W, 208/120V)	18" CTR
D	SPECIAL RECEPTACLE: NEMA 15-30R (30A, 3P, 4W, 208V)	18" CTR
A	SPECIAL RECEPTACLE: FLOOR MOUNTED, NEMA 6-20R	
A	SPECIAL RECEPTACLE: PEDESTAL TYPE, NEMA 6-20R	
	TELEVISION RECEPTACLE	72" CTR
H	TELEVISION RECEPTACLE	18" BFC
	CLOCK HANGER OUTLET	84" CTR
	PROGRAM CLOCK OUTLET: SINGLE FACE, DOUBLE FACE	84" CTR
EPO	EMERGENCY POWER OFF SWITCH	48" TOD
	JUNCTION BOX	
H	JUNCTION BOX - WALL MOUNTED	48" TOD
E	EQUIPMENT CONNECTION AS NOTED	
E H	EQUIPMENT CONNECTION AS NOTED - WALL MOUNTED	48" TOD
3	HEATER CONNECTION - NUMBER INDICATES KILOWATTS (3KW)	
	HEATER FAN - CEILING MOUNTED	
CB	ENCLOSED CIRCUIT BREAKER	
	NON-FUSED DISCONNECT SWITCH: 30A, 3P (UON)	
(40A)	FUSED DISCONNECT SWITCH: FUSE SIZE AS INDICATED (40A)	
MS	MAGNETIC MOTOR STARTER	
FVNR	COMBINATION MAGNETIC MOTOR STARTER: ABBREVIATION INDICATES TYPE - FVNR, FVR, RVAT, 2S1W, 2S2W, SST	
VFC	VARIABLE FREQUENCY CONTROLLER W/ FUSED DISCONNECT SWITCH	
VFD	VARIABLE FREQUENCY DRIVE W/ DISCONNECT SWITCH	
M HP	MOTOR: NUMERALS (IF SHOWN) INDICATE HP	
G KW	GENERATOR: NUMERALS (IF SHOWN) INDICATE KW	
$M	MANUAL MOTOR STARTER W/ THERMAL OVERLOADS	
J $M	MOTOR SWITCH	
	MECHANICAL EQUIPMENT CONNECTION - WITH MOTOR	
J $	MECHANICAL EQUIPMENT CONNECTION - NO MOTOR	
CP	CONTROL PANEL: TYPE AS INDICATED	
PB	MOMENTARY CONTACT START-STOP PUSHBUTTON STATION	48" TOD
PBM	MAINTAINED CONTACT START-STOP PUSHBUTTON STATION	48" TOD
ES	MAINTAINED CONTACT EMERGENCY STOP PUSHBUTTON STATION	48" TOD
	BRANCH PANELBOARD	90" TOC
	DISTRIBUTION PANELBOARD	
T	TRANSFORMER, CONCRETE PAD MOUNTED	

SYMBOL	DESCRIPTION
	RACEWAY "UP" OR "TOWARDS"
	RACEWAY "DOWN" OR "AWAY"
	CIRCUIT CONCEALED IN WALLS OR CEILING SPACE: CONDUCTORS SHALL BE MINIMUM 2#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT (UON)
	RACEWAY CONCEALED IN SLAB OR BELOW GRADE
	BRANCH CIRCUIT HOMERUN TO PANELBOARD: QUANTITY OF CIRCUITS INDICATED BY ARROWS NUMBER OF CONDUCTORS SHALL BE MINIMUM 4#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT (UON)
	RACEWAY RUN EXPOSED: CONDUCTORS SHALL BE MINIMUM 2#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT (UON)
	BUS DUCT OR CABLE TRAY "UP" OR "TOWARDS"
	BUS DUCT OR CABLE TRAY "DOWN" OR "AWAY"
	BUS DUCT: TYPE AND SIZE AS INDICATED
	TELEPHONE AND POWER POLE ASSEMBLY
	CONCRETE ENCASED DUCTBANK BELOW GRADE
W	SURFACE MOUNTED RACEWAY ASSEMBLY WITH REMOVABLE COVER
	MULTI-OUTLET ASSEMBLY: DARK SQUARES INDICATE PREWIRED RECEPTACLE LOCATIONS
	SIZE AS INDICATED. MULTI-OUTLET ASSEMBLY: WITH RECEPTACLES LOCATED WHERE INDICATED
	2 CELL MULTI-OUTLET ASSEMBLY: WITH COMMUNICATION DEVICES AND RECEPTACLES LOCATED WHERE INDICATED
	MULTI-OUTLET ASSEMBLY: WITH COMMUNICATION DEVICES LOCATED WHERE INDICATED
	FLEXIBLE CONDUIT
	CABLE TRAY
	GROUND ROD
	LIGHTNING PROTECTION AIR TERMINAL
G G	GROUND WIRE CONNECTION
G G G	GROUND WIRE
	LIGHTNING PROTECTION DOWN LEAD
	UTILITY POLE

CIRCUIT DESIGNATIONS

LIGHTING: A # a
- A: FIXTURE TYPE
- #: CIRCUIT DESIGNATION (#12AWG MINIMUM)
- a: SWITCH DESIGNATION

POWER: #
- #: CIRCUIT DESIGNATION (#12AWG MINIMUM)

ELECTRICAL SYMBOLS NOTES

1. THIS IS A STANDARD SYMBOL LIST. SOME SYMBOLS MAY NOT APPEAR ON THE ACCOMPANYING DRAWINGS.
2. REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS.
3. PLAN AND SECTION SYMBOLS MAY ALSO BE USED ON RISER DIAGRAMS.
4. ON SINGLE LINE DIAGRAMS FOR 3 PHASE SYSTEMS, DEVICE QUANTITY = 3, UNLESS OTHERWISE NOTED.
5. DEVICE SHALL BE MOUNTED A MINIMUM OF 90" AFF TO BOTTOM OF DEVICE OR BELOW THE FINISHED CEILING OF NOT LESS THAN 6" TO TOP OF DEVICE, WHICHEVER IS LOWER.
6. UNLESS OTHERWISE NOTED, ALL INTERIOR CONDUITS AND BOXES SHALL BE CONCEALED.

ELECTRICAL ABBREVIATIONS

NOTE: THIS IS A STANDARD ABBREVIATION LIST. SOME ABBREVIATIONS MAY NOT APPEAR ON THE ACCOMPANYING DRAWINGS.

2S1W	2 SPEED SINGLE WINDING
2S2W	2 SPEED DOUBLE WINDING
A, AMP	AMPERE
A/C	AIR CONDITIONING
AC	ALTERNATING CURRENT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINAL GRADE
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CAPACITY
ALT	ALTERNATE
ANN	ANNUNCIATOR
APPROX	APPROXIMATELY
ARCH	ARCHITECT
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIOVISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
BOD	BOTTOM OF DEVICE
C, CND	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT, CCT	CIRCUIT
CL	CURRENT LIMITING
CLG	CEILING
CONN	CONNECT
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CTR	CENTER
CU, CO	COPPER
CX	CONNECT TO EXISTING
DC	DIRECT CURRENT
DISC	DISCONNECT
DN	DOWN
DP	DISTRIBUTION PANEL
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DT	DOUBLE THROW
DWG	DRAWING
E, EMERG	EMERGENCY
EA	EACH
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EH	ELECTRIC HEATER
ELEC	ELECTRIC
ELEV	ELEVATION, ELEVATOR
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXP	EXPOSED
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FC	FAN COIL
FDR	FEEDER
FLA	FULL LOAD AMPERES
FLR	FLOOR
FR	FRAME
FU	FUSED, FUSIBLE
FUSS	FUSED SAFETY SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR, GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTED
GFR	GROUND FAULT RELAY
GRD	GROUND
GRS	GALVANIZED RIGID STEEL
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HEAT PUMP, HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
HZ	HERTZ
IG	ISOLATED GROUND
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KW	KILOWATTS
KWH	KILOWATT HOUR
LA	LIGHTNING ARRESTOR
LC	LIGHTING CONTACTOR
LP	LIGHTING PANEL
LRA	LOCKED ROTOR AMPERES
LTG	LIGHTING
LTNG	LIGHTNING
MATV	MASTER ANTENNA TELEVISION
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MEH	METAL HALIDE
MH	MANHOLE, MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
MSP	MOTOR STARTER PANEL
MTD	MOUNTED
MV	MERCURY VAPOR
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NFSS	NON-FUSED SAFETY SWITCH
NO	NUMBER, NORMALLY OPEN
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OVERHEAD
P	POLE
PB	PUSHBUTTON
PF	POWER FACTOR
PFCC	POWER FACTOR CORRECTION CAPACITOR
PL	PILOT LIGHT
PLC	PROGRAMMABLE LIGHTING CONTROL
PNL	PANEL
PP	POWER PANEL
Pp	PUMP
PR	PAIR
PRN	PRINTER
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
Ø, PH	PHASE
QTY	QUANTITY
RCS	REMOTE CONTROL SWITCH
REC, RECPT	RECEPTACLE
REQ'D	REQUIRED
RFI	RADIO FREQUENCY INTERFERENCE
RGS	RIGID GALVANIZED STEEL
RLA	RUNNING LOAD AMPERES
RM	ROOM
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RX	REMOVE EXISTING
SC	SURGE CAPACITOR
SEC	SECONDARY
SN, S/N	SOLID NEUTRAL
SP	SURGE PROTECTION
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SS	SAFETY SWITCH
SST	SOLID STATE
ST	SINGLE THROW
SW	SWITCH
SWBD	SWITCHBOARD
TBR	TO BE REMOVED
TC	TIME CLOCK
TEL, TELE	TELEPHONE
TH	TUNGSTEN HALOGEN
TOC	TOP OF CABINET
TOD	TOP OF DEVICE
TRANS, XFMR	TRANSFORMER
TTB	TELEPHONE TERMINAL BOARD
TW	TWISTED
TYP	TYPICAL
UCB	UNIT CIRCUIT BREAKER
UG	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UV	UNIT VENTILATOR
V	VOLTS
VFC	VARIABLE FREQUENCY CONTROLLER
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS, WIRE
W/	WITH
WP	WEATHER-PROOF
XP	EXPLOSION PROOF

EQUIPMENT DESIGNATIONS

SYMBOL	DESCRIPTION
SWGR	SWITCHGEAR
SWBD	SWITCHBOARD
PNL	PANELBOARD
MCC	MOTOR CONTROL CENTER
XFMR	TRANSFORMER

ELECTRICAL DRAWING PRESENTATION

SYMBOL	DESCRIPTION
#	REVISION NUMBER
1	DRAWING NOTE NUMBER
XX / XX XX	SECTION/ELEVATION IDENTIFICATION
XX / XX	PART PLAN AND DETAIL IDENTIFICATION
	EXISTING LINE TYPE
	NEW ELECTRICAL WORK LINE TYPE
	FUTURE ELECTRICAL WORK LINE TYPE
	DEMOLITION LINE TYPE ON DEMOLITION DRAWINGS

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CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA — RMF ENGINEERING, INC. CHARLESTON, SC C-00857 — REGISTERED ENGINEERS

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 25022 DENNIS M. SEPAUGH

08/09/2022

DRAWN BY:	BWT	DATE:	08/09/2022
DESIGNED BY:	BWT	SCALE:	
CHECKED BY:	DMS	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DMS	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
ELECTRICAL NOTES, SYMBOLS & ABBREVIATIONS

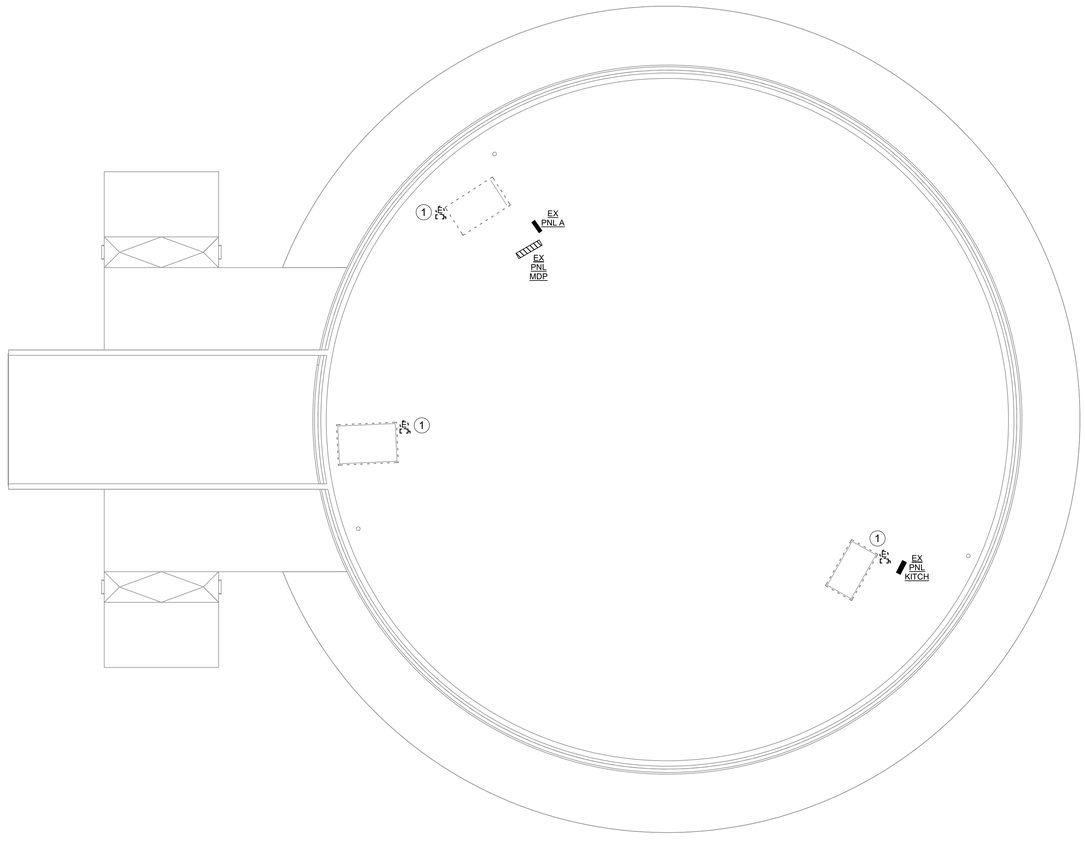
DRAWING NUMBER :
E-001

GENERAL NOTES

1. ITEMS INDICATED WITH DASHED LINES ARE REMOVED IN THEIR ENTIRETY. ITEMS THAT ARE EXISTING TO REMAIN ARE INDICATED WITH LIGHT CONTINUOUS LINES.
2. EXISTING CONDITIONS SUCH AS LIGHTING, RECEPTACLES, ETC. WERE OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL ELECTRICAL ITEMS IN THE FIELD PRIOR TO THE START OF ANY WORK.
3. SHOULD THE CONTRACTOR ENCOUNTER ANY MAJOR ELECTRICAL ITEMS, I.E. PANELS, FEEDERS, JUNCTION BOXES ETC. WHICH ARE NOT ADDRESSED ON THE DRAWINGS, HE SHALL BRING THEM TO THE ATTENTION OF THE ENGINEER. ENGINEER WILL REVIEW THE ITEM IN QUESTION AND PROVIDE DIRECTION.
4. THE OWNER SHALL BE GIVEN A FIRST RIGHT OF REFUSAL FOR ALL ELECTRICAL EQUIPMENT WHICH IS TO BE REMOVED. ALL ELECTRICAL EQUIPMENT WHICH IS DESIRED BY THE OWNER SHALL BE STORED ON THE SITE WHERE DIRECTED BY THE OWNER. THE CONTRACTOR SHALL PROMPTLY DISPOSE OF ALL ELECTRICAL ITEMS WHICH ARE REMOVED AND THE OWNER DOES NOT WANT TO KEEP.

(#) DRAWING NOTES

1 DEMOLISH EQUIPMENT CONNECTION AND DISCONNECTION FOR EXISTING AIR HANDLER UNITS IN ITS ENTIRETY. CIRCUITS AND CONDUCTORS TO BE DEMOLISHED BACK TO SOURCE.



M300 ROOF ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

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CHARLESTON, SC
C-00831
REGISTERED ENGINEERS

NORTH

KEY PLAN

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 25022
DENNIS M. SEMATCH

08/09/2022

DRAWN BY:	BWT	DATE:	08/09/2022
DESIGNED BY:	BWT	SCALE:	1/8" = 1'-0"
CHECKED BY:	DMS	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DMS	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
M300 ROOF ELECTRICAL DEMOLITION PLAN

DRAWING NUMBER :
ED-101

4' 0 4' 8'
SCALE: 1/8" = 1'-0

GENERAL NOTES

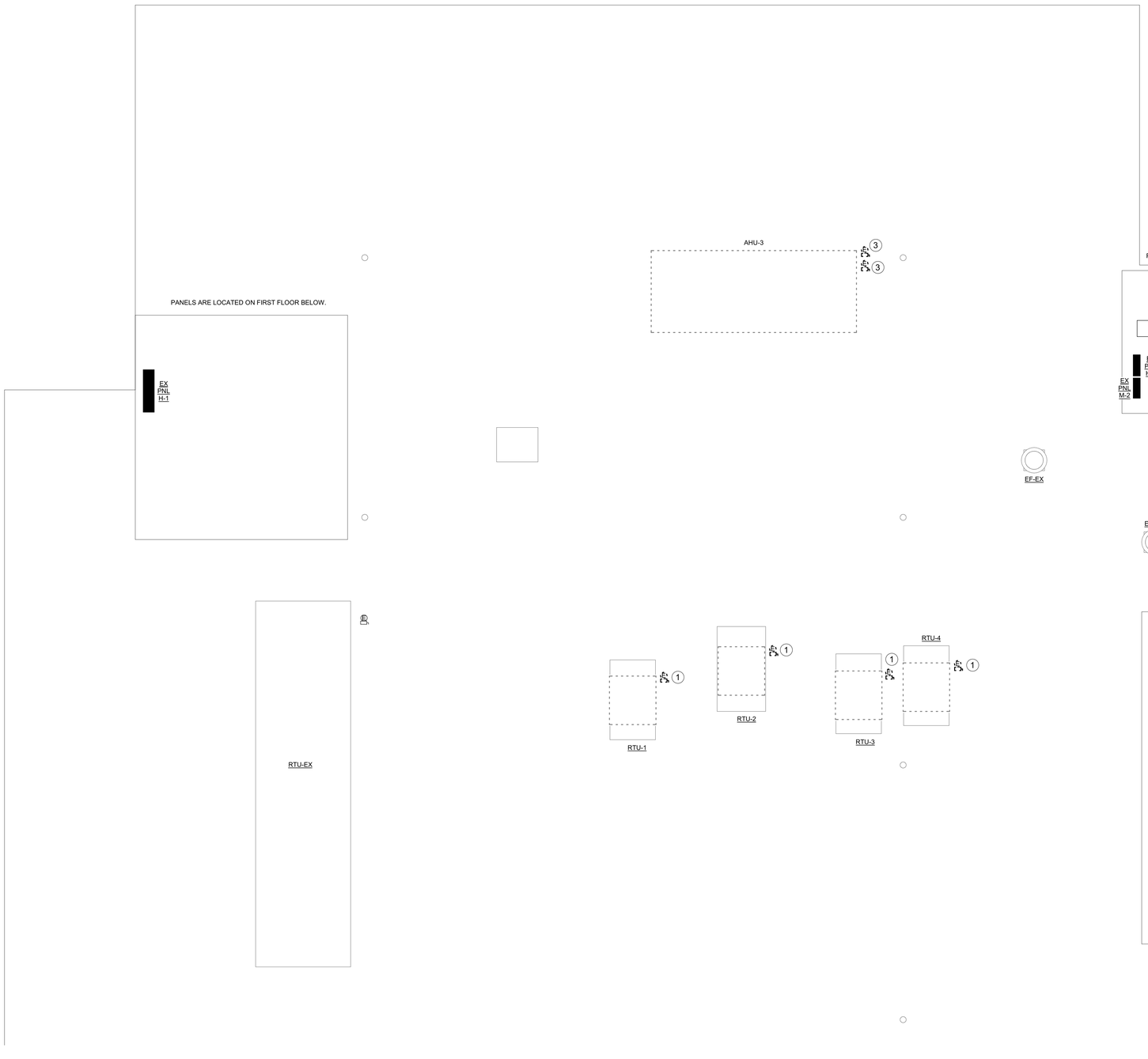
1. ITEMS INDICATED WITH DASHED LINES ARE REMOVED IN THEIR ENTIRETY. ITEMS THAT ARE EXISTING TO REMAIN ARE INDICATED WITH LIGHT CONTINUOUS LINES.
2. EXISTING CONDITIONS SUCH AS LIGHTING, RECEPTACLES, ETC. WERE OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL ELECTRICAL ITEMS IN THE FIELD PRIOR TO THE START OF ANY WORK.
3. SHOULD THE CONTRACTOR ENCOUNTER ANY MAJOR ELECTRICAL ITEMS, I.E. PANELS, FEEDERS, JUNCTION BOXES ETC. WHICH ARE NOT ADDRESSED ON THE DRAWINGS, HE SHALL BRING THEM TO THE ATTENTION OF THE ENGINEER. ENGINEER WILL REVIEW THE ITEM IN QUESTION AND PROVIDE DIRECTION.
4. THE OWNER SHALL BE GIVEN A FIRST RIGHT OF REFUSAL FOR ALL ELECTRICAL EQUIPMENT WHICH IS TO BE REMOVED. ALL ELECTRICAL EQUIPMENT WHICH IS DESIRED BY THE OWNER SHALL BE STORED ON THE SITE WHERE DIRECTED BY THE OWNER. THE CONTRACTOR SHALL PROMPTLY DISPOSE OF ALL ELECTRICAL ITEMS WHICH ARE REMOVED AND THE OWNER DOES NOT WANT TO KEEP.
5. WHERE EXISTING DEVICES REMAIN IN WALLS WHICH RECEIVE A NEW FINISH, CONTRACTOR SHALL SUPPLY ALL NECESSARY OUTLET BOX EXTENSIONS, PLASTER RINGS, ETC. SO THAT DEVICES INSTALLED IN THE SAME MANNER AS EXISTING. REMOVE ALL EMPTY RACEWAYS AND BOXES THAT ARE ABANDONED.
6. AFTER CEILING IS DEMOLISHED, CONTRACTOR SHALL SUPPORT ALL CONDUIT AND CLOSE ALL J-BOXES.
7. CONTRACTOR TO REPLACE ALL DEVICES AND FACE PLATES FOR AREAS WHERE SCOPE OF WORK IS PERFORMED SO THAT EXISTING TO REMAIN DEVICES AND NEW DEVICES MATCH. TRACE RECEPTACLE CIRCUITS, FACEPLATES SHALL BE LABELED WITH CIRCUIT NUMBER AND PANEL.

(#) DRAWING NOTES

1 DEMOLISH EQUIPMENT CONNECTION AND DISCONNECTION FOR EXISTING ROOF TOP UNITS IN ITS ENTIRETY. CIRCUITS AND CONDUCTORS TO BE DEMOLISHED BACK TO SOURCE.

2 PANEL AND TRANSFORMER TO BE DEMOLISHED IN ITS ENTIRETY. CONDUCTORS TO BE DEMOLISHED BACK TO MOTOR CONTROL CENTER EX MCC.

3 DEMOLISH EQUIPMENT CONNECTION AND DISCONNECT FROM AIR HANDLER UNIT IN ITS ENTIRETY. CIRCUIT AND CONDUCTORS TO BE DEMOLISHED BACK TO SOURCE.



M500 ROOF ELECTRICAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0

RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
SUITE G
CHARLESTON, SC 29492
P: 843-971-9639 F: 843-971-9641

CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA — RMF ENGINEERING, INC. CHARLESTON, SC C-00831 — REGISTERED ENGINEERS

NORTH

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SEAL:

SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 25022 — DENNIS M. SEMPSKI

08/09/2022

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PROJ. MGR.:	DMS	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
M500 ROOF ELECTRICAL DEMOLITION PLAN

DRAWING NUMBER :
ED-102

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY SIZES OF ALL COMPONENTS SERVING HVAC EQUIPMENT (CIRCUIT BREAKERS, CONDUCTORS, DISCONNECT SWITCHES, ETC.) WITH NAMEPLATE REQUIREMENTS OF SUCH EQUIPMENT. THE CONTRACTOR SHALL ADJUST SIZES AS NECESSARY TO MEET THE REQUIREMENTS OF THE ACTUAL EQUIPMENT PURCHASED.

(#) DRAWING NOTES

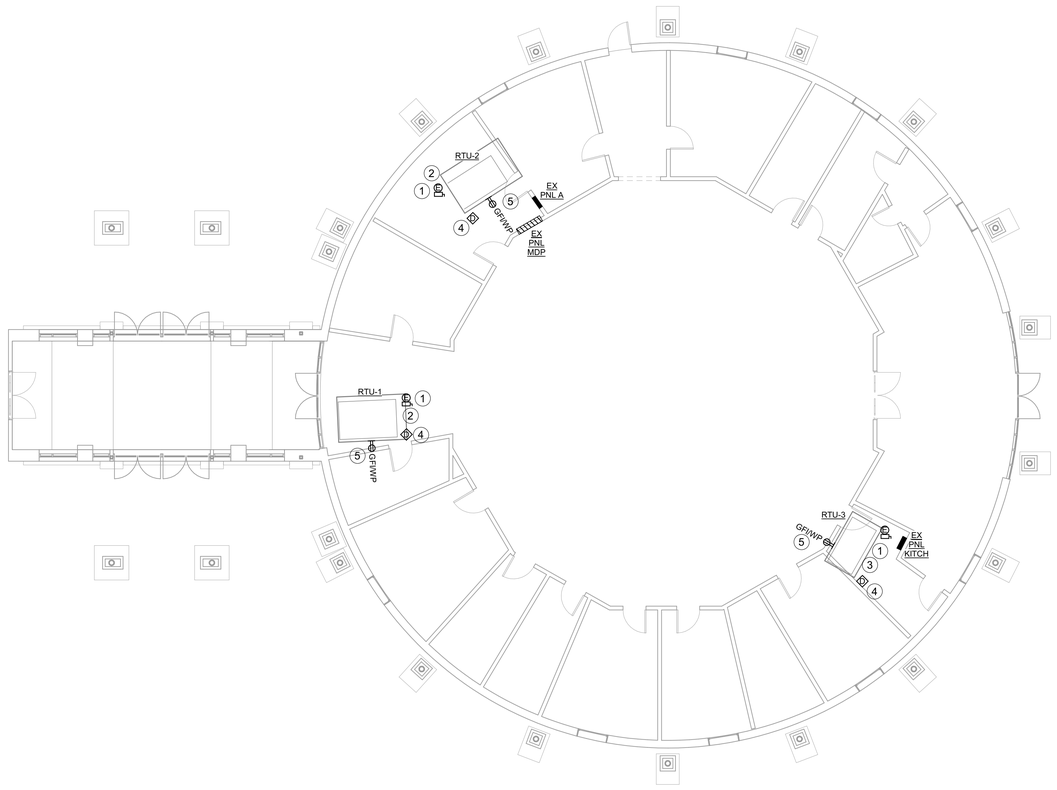
1 PROVIDE EQUIPMENT CONNECTION AND DISCONNECT FOR RTU-1, RTU-2, AND RTU-3. CIRCUIT AND CONDUCTORS TO BE PROVIDED FROM ASSOCIATED PANELS WHERE EXISTING AIR HANDLER UNITS WERE DEMOLISHED DURING DEMOLITION PHASE.

2 PROVIDE 208V, 3P, 110A BREAKER IN NEXT AVAILABLE SPACE IN EXISTING PANEL MDP LOCATED ON FIRST FLOOR. PROVIDE 3#1AWG + 1#6GRD IN 1 1/2" CONDUIT FROM EXISTING PANEL MDP ON FIRST FLOOR TO DISCONNECT LOCATED ON ROOF. PROVIDE 240V, 3P, 200A NON FUSED SAFETY SWITCH IN NEMA 3R ENCLOSURE.

3 PROVIDE 208V, 3P, 60A BREAKER IN NEXT AVAILABLE SPACE IN EXISTING PANEL MDP LOCATED ON FIRST FLOOR. PROVIDE 3#4AWG + 1#10GRD IN 1 1/4" CONDUIT FROM EXISTING PANEL MDP ON FIRST FLOOR TO DISCONNECT LOCATED ON ROOF. PROVIDE 240V, 3P, 60A NON FUSED SAFETY SWITCH IN NEMA 3R ENCLOSURE.

4 PROVIDE DUCT SMOKE DETECTOR TO BE INSTALLED BY DIVISION 23 AND WIRED BY DIVISION 28. CONNECT TO EXISTING FIRE ALARM SYSTEM.

5 PROVIDE OUTDOOR RECEPTACLE. WIRE TO NEAREST 120 VOLT RECEPTACLE CIRCUIT.



M300 ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
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CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC.
CHARLESTON, SC
C-00831
REGISTERED ENGINEERS

NORTH

KEY PLAN

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:
LICENSED PROFESSIONAL ENGINEER
No. 25022
DENNIS M SEPAUGH
08/09/2022

DRAWN BY:	BWT	DATE:	08/09/2022
DESIGNED BY:	BWT	SCALE:	1/8" = 1'-0"
CHECKED BY:	DMS	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DMS	CLIENT JOB #:	HS9-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
M300 ROOF ELECTRICAL NEW WORK PLAN

DRAWING NUMBER :
E-101

4' 0 4' 8'
SCALE: 1/8" = 1'-0

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY SIZES OF ALL COMPONENTS SERVING HVAC EQUIPMENT (CIRCUIT BREAKERS, CONDUCTORS, DISCONNECT SWITCHES, ETC.) WITH NAMEPLATE REQUIREMENTS OF SUCH EQUIPMENT. THE CONTRACTOR SHALL ADJUST SIZES AS NECESSARY TO MEET THE REQUIREMENTS OF THE ACTUAL EQUIPMENT PURCHASED.

(#) DRAWING NOTES

1 PROVIDE EQUIPMENT CONNECTION AND DISCONNECT FOR RTU-1, RTU-2, RTU-3, RTU-4, AND AHU-3. CIRCUIT AND CONDUCTORS TO BE PROVIDED FROM ASSOCIATED PANELS WHERE EXISTING AIR HANDLER UNITS WERE DEMOLISHED DURING DEMOLITION PHASE.

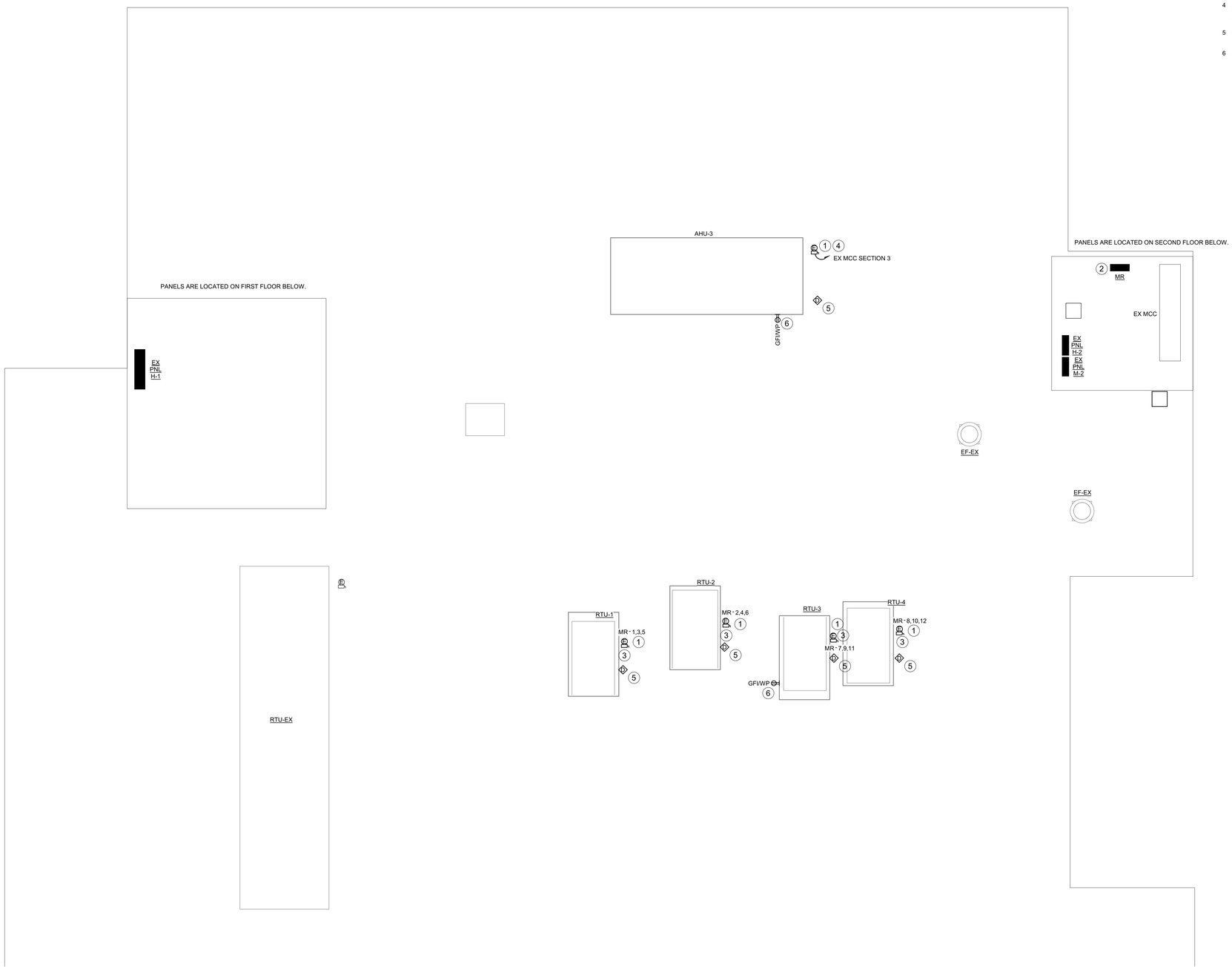
2 PROVIDE 480V, 3P, 200A PANEL MR FOR ROOF TOP UNITS. PROVIDE 4#3/0AWG + 1#6GRD IN 2 2/12" CONDUIT FROM EXISTING MOTOR CONTROL CENTER MCC TO PANEL MR. PANEL LOCATION SHALL BE IN ACCORDANCE PER NEC CLEARANCE REQUIREMENTS.

3 PROVIDE 600V, 3P, 60A NON-FUSED SAFETY SWITCH IN NEMA 3R ENCLOSURE FOR ROOF TOP UNITS. COORDINATE EXACT LOCATION WITH MANUFACTURERS' RECOMMENDATIONS. SEE PANEL SCHEDULE ON SHEET E-601 FOR CONDUIT AND WIRE SIZE.

4 PROVIDE 600A, 3P, 200A NON-FUSED SAFETY SWITCH IN NEMA 3R ENCLOSURE FOR AIR HANDLING UNIT. COORDINATE EXACT LOCATION WITH MANUFACTURER'S RECOMMENDATIONS. SEE ONE-LINE DIAGRAM ON SHEET E-601 FOR CONDUIT AND WIRE SIZE

5 PROVIDE DUCT SMOKE DETECTOR TO BE INSTALLED BY DIVISION 23 AND WIRED BY DIVISION 28. CONNECT TO EXISTING FIRE ALARM SYSTEM.

6 PROVIDE OUTDOOR RECEPTACLE. WIRE TO NEAREST 120 VOLT RECEPTACLE CIRCUIT.



M500 ROOF ELECTRICAL NEW WORK PLAN
SCALE: 1/4" = 1'-0"

RMF ENGINEERING, INC.
194 SEVEN FARM DRIVE
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CHARLESTON, SC 29492
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CENTRAL CAROLINA TECHNICAL COLLEGE

STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC.
CHARLESTON, SC
C-00831
REGISTERED ENGINEERS

NORTH

KEY PLAN

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 25022
DENNIS M. SEPAUGH
08/09/2022

DRAWN BY:	BWT	DATE:	08/09/2022
DESIGNED BY:	BWT	SCALE:	1/4" = 1'-0"
CHECKED BY:	DMS	RMF JOB NO.:	03210470.A0
PROJ. MGR.:	DMS	CLIENT JOB #:	H59-6178-FW

PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
M500 ROOF ELECTRICAL NEW WORK PLAN

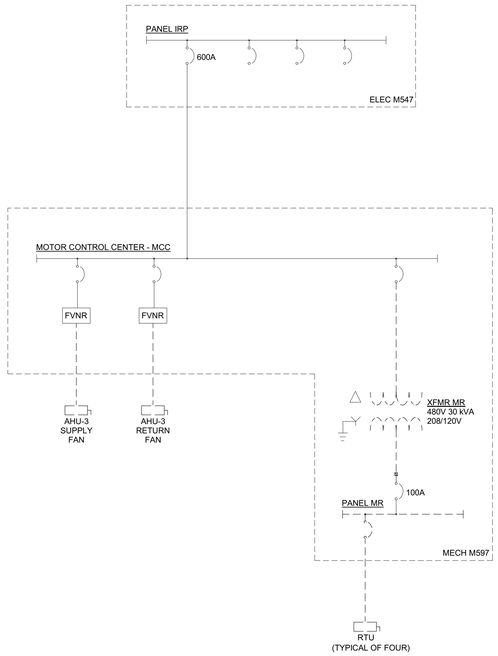
DRAWING NUMBER :
E-102

2' 0 2' 4'
SCALE: 1/4" = 1'-0

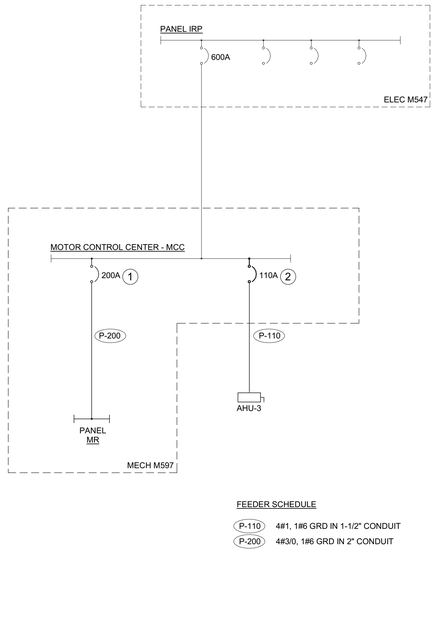
DRAWING NOTES

1 PROVIDE 200A 3-POLE CIRCUIT BREAKER IN EXISTING MOTOR CONTROL CENTER MCC. PROVIDE MCC BUCKET AND ASSOCIATED HARDWARE REQUIRED TO CONNECT TO THE BUSWORK.

2 PROVIDE 110A 3-POLE CIRCUIT BREAKER IN EXISTING MOTOR CONTROL CENTER MCC. PROVIDE MCC BUCKET AND ASSOCIATED HARDWARE REQUIRED TO CONNECT TO THE BUSWORK.



M500 - ONE-LINE DIAGRAM - DEMO



FEEDER SCHEDULE

P-110	4#1, 1#6 GRD IN 1-1/2" CONDUIT
P-200	4#3/0, 1#6 GRD IN 2" CONDUIT

M500 - ONE-LINE DIAGRAM - NEW WORK

PANELBOARD: MR

LOCATION:
MOUNTING: Surface
ENCL NEMA: Type 1
MIN AIC: 35,000A

MAINS: MCB
VOLTS: 480/277 Wye
PHASE: 3
WIRES: 4

AMPS: 200

PANEL NOTES:
PROVIDE GROUND BUS
PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE

WIRE SIZE	LOAD DESCRIPTION	P	TRIP AMPS	TYPE	CKT	A		B		C		CKT	TYPE	TRIP AMPS	P	LOAD DESCRIPTION	WIRE SIZE
3#8AWG + 1#10GRD IN 1" CND	RTU-1	3	35 A		1	7.75	9.96					2		45 A	3	RTU-2	3#8AWG + 1#10GRD IN 1" CND
					3			7.75	9.96			4					
					5					7.75	9.96	6					
3#8AWG + 1#10GRD IN 1" CND	RTU-3	3	35 A		7	7.75	7.75					8		35 A	3	RTU-4	3#8AWG + 1#10GRD IN 1" CND
					9			7.75	7.75			10					
					11					7.75	7.75	12					
--	SPACE	1	--	--	13	--	--					14	--	--	1	SPACE	--
--	SPACE	1	--	--	15			--	--			16	--	--	1	SPACE	--
--	SPACE	1	--	--	17					--	--	18	--	--	1	SPACE	--
--	SPACE	1	--	--	19	--	--					20	--	--	1	SPACE	--
--	SPACE	1	--	--	21			--	--			22	--	--	1	SPACE	--
--	SPACE	1	--	--	23					--	--	24	--	--	1	SPACE	--
					TOTAL LOAD:	33.21 kVA		33.21 kVA		33.21 kVA							

BREAKER TYPE KEYS:
LO - INDICATES C.B. EQUIPPED WITH "LOCK-ON" DEVICE
GF - INDICATES C.B. IS GROUND FAULT TYPE (5mA FOR PERSONNEL)
ST - INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
HT - INDICATES C.B. EQUIPPED WITH 30mA GROUND FAULT FOR EQUIPMENT

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	99.64	100.00%	99.64		
				Total Conn. Load:	99.64 kVA
				Total Est. Demand:	99.64 kVA
				Total Conn. Current:	119.85 A
				Total Est. Demand Current:	119.85 A

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STATE OF SOUTH CAROLINA
RMF ENGINEERING, INC
CHARLESTON, SC
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REGISTERED ENGINEERS

REV	DESCRIPTION	DATE

REVISIONS

SUBMISSION TITLE :
BIDDING DOCUMENTS

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 25022
DENNIS M. SEPRUCH

08/09/2022

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PROJECT NAME :
MAIN CAMPUS – HVAC UPDATES/ REPLACEMENTS

PROJECT ADDRESS :
506 N GUIGNARD DRIVE
SUMTER, SC 29150

DRAWING TITLE :
ELECTRICAL SCHEDULES

DRAWING NUMBER :
E-601